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**An Assessment of Technology-Centered Art Learning for Students with  
Autism Spectrum Disorder Using Universal Design for Learning  
Curriculum**

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**An Assessment of Technology-Centered Art Learning for Students with  
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Curriculum**

**by**

**Abby Lynn Hahn, BFA**

**Thesis**

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## **Dedication**

I would like to dedicate this thesis document to my mother, Judi Hahn, my father, Alan Hahn, and my sister, Kristen Hahn. Their cumulative support has enabled me to complete all that I have, and I appreciate all they have done for me. I am proud to have them as family and cannot imagine where I would be without them.

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## **Abstract**

# **An Assessment of Technology-Centered Art Learning for Students with Autism Spectrum Disorder Using Universal Design for Learning Curriculum**

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Working collaboratively with VSA Texas, the research study examined how a Universal Design for Learning (UDL) curriculum functions for students with Autism Spectrum Disorder in an art learning setting. The curriculum focused on learning new media for art making in the form of digital film and video. My research and proposed successful classroom strategies are intended to assist current and future art educators in implementing aspects of UDL in their inclusive art classrooms to better educate students with disabilities through art.

## Table of Contents

Chapter 1: Introduction .....	1
Introduction.....	1
Central Research Question.....	2
Problem Statement .....	2
Motivations for Research.....	4
Definition of Terms.....	7
Limitations to the Study.....	8
Benefits to the Field of Art Education and Beyond.....	9
Research Methodology .....	9
Chapter 2: Review of Pertinent Literature .....	11
ASD/Students with Disabilities and Art .....	11
Inclusion and Paraeducators .....	14
Methodology: The Case Study.....	18
Technology, Art Learning and Autism .....	20
Universal Design for Learning and Assistive Technology .....	22
Evaluation and Rubrics .....	29
Chapter 3: Environment: <i>Program and Participants</i> .....	32
VSA Texas .....	32
New Media Arts Program .....	34
Associated UDL Planning.....	36
Study Participants .....	36
Chapter 4: The Case Study: Methodology.....	49
Qualitative Research .....	49
Case Study: A Macro View .....	50
Case Study: A Micro View .....	53
Chapter 5: Data and Analysis .....	59
ASD/Students with Disabilities and Art .....	59

Recommendations for Inclusion and use of Paraeducators .....	63
Technology, Art Learning and Autism .....	66
Universal Design for Learning.....	70
Evaluation and Rubrics .....	77
Documented Successful Classroom Strategies .....	80
Chapter 6: Conclusions, Reflections, and Recommendations for Future Research	87
Recap of the Study .....	87
My Study Pertaining to My Problem Statement.....	88
Personal Reflections.....	89
Recommendations for Future Research .....	94
Appendix A.....	99
Appendix B .....	105
Daily Classroom Schedule.....	105
References.....	108



## **Chapter 1: Introduction**

### **INTRODUCTION**

The purpose of this study was to better understand how students with disabilities are educated through art. I observed and investigated a group of students with disabilities, specifically those on the autism spectrum in their transition stage of education. The setting of observation was a summer art program organized by VSA Texas<sup>1</sup> in Austin, Texas. The program is entitled New Media Arts (NMA) and involves art projects with traditional and technological methods of art production. Specifically, students created art with the use of new media in the form of photographs and digital film. There were two camps held during this particular summer. The first camp focused on building digital photography skills, while the second was directed toward filmmaking. The camp dates were from June 20 – 30, 2011 for the first round of classes, and July 11-21, 2011 for the second set. Each session with the students and teachers lasted from 10:00 am until 2:00 pm, in which I observed and interacted with students, teachers, volunteers, and student aides. At the NMA class I participated as an active volunteer for VSA Texas with goals of gaining a more clear understanding of “best practices” to educate students with disabilities, focusing on students with autism, through teaching techniques and curriculum. The curriculum style utilized in VSA Texas’s NMA course is Universal Design for Learning (UDL). Through an investigation of this program I

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<sup>1</sup> VSA Texas, formerly known as Very Special Arts, is officially using the name VSA to reflect current language trends referring to individuals with disabilities. VSA-- The International Organization on Arts and Disabilities will be addressed as VSA in this study.

focused on how UDL worked, and how it can be used to effectively educate students with disabilities. Before the program began and following the completion of each session, I helped VSA Texas educators conduct student evaluations focusing on both their artistic skills in photography, film, etc. and more practical life skills. One of my goals was to document what I felt to be the best practices used, which I can then apply in my own teaching for students with disabilities and other students in inclusive art classrooms.

#### **CENTRAL RESEARCH QUESTION**

Students with disabilities often do not receive the art education and art experiences they deserve, even when laws are in place protecting their right to a free and appropriate public education. A seemingly successful researched method of educating students with disabilities in inclusive classrooms is the Universal Design for Learning curriculum. Through this research I sought to learn the following: Utilizing case study methodology, what insights can be drawn on how a working Universal Design for Learning curriculum effectively serves students with Autism in the art classroom? What recommendations can be made that may assist art educators in successfully implementing this type of curriculum and accurately measuring the improvement and performance of students with disabilities?

#### **PROBLEM STATEMENT**

Students with disabilities are commonly mainstreamed into the general art classroom. This means that art educators have the responsibility of teaching students at

different developmental levels, and with various individual needs. Most certified art educators have limited experience working with students who have disabilities, and may not have the confidence or knowledge to appropriately educate students that have mixed abilities. Overall, the population of school aged children with disabilities are not receiving the appropriate education they deserve, and are required by law to receive, due to the under-education of art teachers and the high amount of pressure put upon them because of these laws (Kiefer-Boyd & Kraft, 2003). Also, when paraeducators are assigned to assist a student with a disability in the classroom, it is important they have the adequate training to provide the student and art teacher with the appropriate level of support so the student with a disability gains the most from the art curriculum created by the art teacher.

A potential solution for ensuring appropriate education of students with disabilities, as well as typically developing students with unique learning styles, is the Universal Design for Learning curriculum (UDL). Even though resources for UDL curriculum examples and techniques are available, many art teachers do not have the knowledge of these ideas or are hesitant to use them because UDL curriculum is often very involved and requires much work by the art teacher outside of class. UDL curriculums are also unique because they often involve technological supports for instruction, and this addition to the curriculum may not be feasible for all classrooms to obtain. There are options for teachers who cannot secure the support from their school for buying adaptive technological assistance, but it seems as though the UDL curriculums are still not being implemented. I think if more general education teachers learn about UDL curriculum design, and an increased number of successful UDL implementation examples are presented, teachers may choose to supplement their existing curriculum

with some UDL elements and students with disabilities may receive a more appropriate education in the classroom, without the need for as much support from special education teachers or aides by their side in class.

Another problem in education, and for art education specifically, is how teachers choose to evaluate students. The art room is an especially difficult environment to evaluate students because student work is often qualitative, process oriented, and time and effort based. It is a challenge to evaluate students with disabilities, especially the Autism Spectrum Disorder (ASD) population, because students with ASD have a difficult time retaining skills and knowledge acquired in class. It is a complex initiative to measure improvements for students that may progress in small increments, and also students who have good and bad days. So, in addition to the difficulty of evaluating all students more generally in the art classroom, when teachers have students with disabilities participating, they are often unaware of how to include them in the assessment process.

## **MOTIVATIONS FOR RESEARCH**

### **Personal Motivations**

My interest in the education of students with special needs began when I took an undergraduate elective course titled *Perspectives on Deafness*. In this class I learned a great deal about what education is like for students with disabilities. Various laws and educational procedures were explored for this population that were applicable to other disabilities. Before taking this class I was completely unaware of protocols and laws

involved in the education of students with special needs. Something else that I was specifically interested in was the Deaf culture, which happens to be very strong in Austin.

When I started graduate school I began taking courses required for my teacher certification. One of these classes was *Individual Differences*, which was directed toward the education of students with a wide range of disabilities. This class was very significant in my decision to direct my thesis research toward the investigation of students with disabilities. In this class, not only did we learn about different disabilities in terms of symptoms and characteristics, we continued the study of laws that protect their right to a free and appropriate public education. This class is where I gained a grasp of critical concepts such as Individualized Education Plans, the Least Restrictive Environment, and the individual student's right to a Free and Appropriate Public Education.

The most influential part of the *Individual Differences* class was the required fieldwork. Each student in the course had to choose a volunteer site to work at during the semester. I chose a summer camp/day care facility called Sammy's House, located in North/Central Austin. At Sammy's House I was able to spend time playing with children who have disabilities, with an age range from infancy to age eight. I gained many valuable insights and memories from my time there and I enjoyed spending my energies with the kids. What I learned factually from the course combined with the associated field experiences at Sammy's House have made me want to become an advocate for the education of students with disabilities.

## **Professional Motivations**

Since the art classroom is a common environment for students with disabilities, and specifically autism, to be educated under inclusion, I feel it is appropriate that I learn more about educating this population of students. The research literature I encountered seems to suggest that students with disabilities are not often appropriately served in public school. Since these students have the right to a “Free and Appropriate Public Education,” some changes need to be made in order to address the educational needs and rights of the students. Even though I am a pre-service graduate student, it is my understanding that most of the responsibility of educating students with disabilities falls on the general classroom art teacher. I do not believe that from the course requirements I have completed for my teaching certification that I have an appropriate level of understanding about techniques and best practices on how to educate these students in my future classroom. Assuming that I am likely not alone in this belief, I set out to gain some insights into best practices in terms of curriculum and teaching techniques from my thesis research that can be applied to education of students with disabilities in the inclusive general art classroom.

My goal is to share this research with other educators and future educators. I believe that more research like this needs to be conducted in order to learn from special educators in an artistic environment. There seems to be a lack of information available on how to educate this population within the art classroom setting, but a plentiful amount of material is available regarding the belief that inclusion students are not often being educated appropriately in general art classrooms.

## DEFINITION OF TERMS

***Autism Spectrum Disorder/ASD:*** ASD is a complex developmental disability that causes individuals to demonstrate deficits in social interaction, communication, learning and behaviors. Signs of ASD usually begin at a very early age and individuals have difficulty relating appropriately to others, present a range of language and communication disorders, have difficulty encountering school curriculum, have obsessive needs of environmental sameness, and often have repetitive and self-stimulatory responses in behavior (Simpson, de Boer-Ott, & Smith-Myles, 2003).

***IDEA:*** The Individuals with Disabilities Education Act (IDEA), is federal legislation with a strong preference for students to be educated alongside their non-disabled peers. The appropriateness of educational environment (LRE) is the determining factor for student placement. The law emphasizes the rights of individuals to participate in and contribute to society. Ideally, students are actively involved in their educational process (Kiefer-Boyd & Kraft, 2003).

***LRE:*** The mandated Least Restrictive Environment (LRE), is where students must be educated in order to be in compliance with IDEA. The LRE is often a setting where students can interact with their non-disabled peers unless the disability is so severe that the student cannot participate in the general education classroom independently or participate using the supports of aides and assistive technology (Guay, 2003).

***Inclusion:*** Inclusion is used in this study to describe the philosophy that encourages schools in particular to welcome and value all students into the classroom, regardless of their disabilities, differences, or adaptive needs. The philosophy encompasses the beliefs that everyone belongs, all students can learn from one another, and that diversity is valued (Renzaglia, Karvonen, Drasgow, & Stoxen, 2003).

***VSA Texas:*** Previously Very Special Arts, VSA Texas is the nonprofit organization wherein I conducted this research. This organization works with individuals who possess disabilities, with the goal to create a society where this population learns through, participates in, and enjoys the arts. The organization promotes creativity in individuals with disabilities by working with the community to facilitate access to the arts. They also hold a strong importance to helping individuals with gainful employment, and building meaningful connections and friendships after the transition stage of public education ([www.vsatx.org/aboutUS.html](http://www.vsatx.org/aboutUS.html)).

#### **LIMITATIONS TO THE STUDY**

I believe this study to be very specific in nature. The parameters are appropriate for a research project of thesis length. I researched a summer art program with two sessions, which were each ten days long. Eight or nine students attended each session. The students all volunteered to participate, paid a fee to join the class, and attended these sessions on their own free will. Most participants were in their “transition stage” of education, meaning they have completed most of their school coursework and were looking to find employment and stability in their adult lives after school. In this stage of education the students are 18-21 years old, but the program accepts students as young as 15, and during this camp as old as 29. All students have been previously identified as having a disability and are diagnosed as being on the autism spectrum. Participants are aware of the program through their involvement through VSA Texas; therefore, the population I researched was not a random selection. These students attended the program



because the individuals at VSA alerted them to the program. There was not a control group in this experimental case study of evaluation and New Media Arts.

### **BENEFITS TO THE FIELD OF ART EDUCATION AND BEYOND**

This research has the most potential to benefit general education art teachers as well as pre-service art educators. It is undertaken to provide some insights into how a working UDL curriculum can be implemented in the general education art classroom. Also, it may offer these teachers ideas on how to evaluate students with disabilities and students who are developing in a more typical manner.

The study also has potential to benefit the overall development of best practices for educating students with Autism. The research using new media in this VSA summer class is built upon and expanding on current research about implementation of technological supports in teaching students with ASD. So far, most of the research available on using technology with the population is directed toward the employment of technological supports to deliver instruction. The VSA NMA program is taking this idea in a different direction and teaching these individuals how to use technology for their own creative outlet, and instructing them in how to utilize technology for future art employment possibilities.

### **RESEARCH METHODOLOGY**

The most fitting methodology for my research was a case study. My investigations were conducted with a specific group of students all experiencing the same disability. Though ASD has varied symptoms and ways that it is expressed, all students

engaged in this study have an Autism diagnosis. My research relied heavily on descriptions of events, projects, planning, instruction and interaction in the classroom. In a way I could justify my research as being a narrative case study. In the study I utilized audio recordings of certain parts of lessons to aide in my documentation of the happenings of the classroom. An important aspect of the methodology of a case study is that most often it is a linear method. The way that the summer program at VSA Texas was organized, the learning of the students also occurred in a linear fashion. What was important to me in my research, as it is essential in most case studies, was the how and the why of what was encountered. How do educators implement a successful UDL curriculum? Why is it effective for students with ASD? How can I help influence and potentially educate other art educators on using certain techniques and “best practices” that I discover? The flexibility in a case study was also appealing to me in that there are different ways to conduct a study, and various methods of gathering data. Because I had a lot of time within the research setting to conduct my study (4 weeks in all) I found it valuable to have some flexibility in exploring what worked best for me as a researcher, and what would contribute most to my study.

This introductory chapter has explained my central research inquiries and defined what aspects of the VSA Texas summer camp I focused on in my research. The problem statement addresses the need for a study such as this to inform educators about UDL curriculums, and to introduce instructional techniques to better educate individuals with ASD in an inclusive classroom. Chapter Two is a review of literature that will take a closer look at some of the main concepts and issues I have addressed in the Introduction, and provides a substantive grounding for the study I conducted.

## **Chapter 2: Review of Pertinent Literature**

In this review of pertinent literature presents an overview of current writings relevant to this study. Information is provided about ASD, inclusion and paraeducators, case study methodology, the basics of Universal Design for Learning as well as other relevant topics to assist the reader in understanding the essential theoretical and practical background and focus of the study.

### **ASD/STUDENTS WITH DISABILITIES AND ART**

The benefits of art education for students with disabilities have been widely presented by researchers such as Epp (2008), Mason, Steedly & Thormann (2005), and McDevitt (2004). Whether in the form of art therapy, visual supports for instruction and learning, self expression, or simply the value of feeling accomplished and a sense of self worth one gets after completion of an art project, art is viewed as an important part of the education of students with disabilities and especially students with Autism Spectrum Disorder (ASD).

Christine Y. Mason, Kathlyn M. Steedly, & Mary S. Thormann (2008) are particularly convincing in their discussion of the benefits of art education for students with disabilities. One of their research studies is about art and the impact it makes on students' voice, choice, and access. These authors believe there is little research about the value of the arts to improve academic, cognitive, and social skills, so they conducted a study to examine the benefits of art and how it improves these aspects of development. When reviewing the results they gathered from teachers across the country, three themes emerged regarding how the arts impacted students' voice, choice, and access.

The voices of students can be expressed through art as they communicate information about themselves and the world. Choice is exercised as the students decide which mediums to use and what message to convey. Access to success is granted through the arts to students in the form of building a deeper sense of self, artistic skills, and confidence.

These same three authors (Mason, Steedly, & Thormann, 2005) also studied the impact of the arts on social, cognitive, and academic skills. This study included 34 focus groups and interviews with a range of teachers. The researchers utilized the stories from the interviewees, which provided anecdotal evidence for the value of including art in the instruction of students with disabilities. The individuals involved in the study provided examples of learned appropriate communication, increased problem solving, development of vocabulary, and other improvements addressing social, cognitive, and academic skills all generated through the learning of art.

Autism is a disability that typically affects social skills. Through the previous two research projects, as well as others, researchers have identified the ability of teachers to utilize the arts to improve these skills among the given population. Another example of an outcome-based research project targeting students with ASD that specifically demonstrated the improvement of social skills utilized group therapy and art therapy to improve these skills. Since a lack of social skills is such a prominent issue for students with ASD, the ability to make improvements in this area through art is very exciting and there is good evidence to support the connection between social skills improvement and art making. Problem behavior reduction was also noted as a positive outcome of using group and art therapy (Epp, 2008).

In conducting a research study about students with autism and art making, it is important to know how the population interacts with art. People diagnosed with autism readily produce drawings, and we are beginning to understand and conduct an increasing amount of research about the thought process and level of understanding associated with artistic creation. Children with ASD have difficulty drawing distinctive images of humans, but not houses. These students also have a hard time drawing objects or things that do not exist in real life. For example, a student with ASD would not be able to draw an imaginary person with four legs. Another difficulty they have is deciphering the intent of another artist. The student has an easier time decoding their own drawing, when compared with a drawing they did not create (Allen, 2008). In particular, faces and emotions are difficult for students with ASD to comprehend and represent. This difficulty stems from the lack in social skills noted that usually occur with autism. Subtle changes in expression perplex these students, and they rarely can identify social emotions, such as presentations of embarrassment (Martin, 2008).

Art may have an especially strong impact on students with ASD due to their visual thought processes. This population will often react well to visual stimulus in the learning environment, especially if it is bright and vivid. It is important for educators to know these benefits to students and be able to design art-learning experiences that are both visually stimulating while being open to interpretation. Modification and flexibility are often held at a high importance when designing lessons for children with ASD. Since there are various levels of functioning for individuals on the Autism Spectrum, it is important that lesson plans are malleable and have the ability to be modified to reach a broad student audience. For some, the most important part of the lesson may be any level of observable participation, because even small accomplishments, like participation and

generation of art, can have a great influence on the child's sense of self worth and accomplishment (McDevitt, 2004).

### **INCLUSION AND PARAEDUCATORS**

Inclusion of students with disabilities has been highly supported in general education classrooms for some time, and the art room was one of the first environments where students with disabilities were included (Causton-Theoharis & Burdick, 2008). There are few educators who do not believe that inclusion is a viable solution for the education of students with disabilities. However, some who do not support inclusion believe that students with disabilities can be a liability, distraction, and burden in general classrooms (Smelter & Rasch, 1994).

Though some are uncomfortable with including students with disabilities in their classes, the popular opinion held is that inclusion is the best option for students with disabilities, as long as the setting is appropriate. Some educators also believe that in the act of placing the more severely disabled students in the general art classroom will promote diversity, and that other more "normal" students can benefit from the addition of these students in the classroom. The idea is that students with more abilities will be able to help any individuals that may need assistance in day-to-day classroom activities. In this diverse environment the student with a disability will have the opportunity to achieve success to fulfill their highest potential. Within the philosophy of inclusion, the only reason to place a student in a special education classroom would be if the student's potential could not be reached without receiving the supports available in the more segregated and secluded special education classroom. In order for inclusion to be successful, the level of competence about inclusive education and amount of individual

attention that the teacher is willing to give to the student is paramount. This attention comes with a great deal of responsibility when the student has needs associated with a physical disability. It takes an exceptional general education teacher to take on the responsibility of a student with more severe special needs without the assistance of a classroom aide (Stoler, 1992).

In Robert Dennis Stoler's article (1992) entitled "Perceptions of Regular Education Teachers Towards Inclusion of All Handicapped Students in Their Classrooms," the author provides information regarding a research project looking for differences in attitudes and perceptions that teachers had of students with disabilities. The research also focused on the teachers' varying levels of education as well as how any training they have received in special education changed their point of view of the students and their perspective toward inclusion in the general education classroom. The study made use of surveys that researchers sent to teachers holding high school education positions. Similar to other research on teacher's preparedness, most of the educators in the study had never taken a class on special education. The teachers who did have training in special education completed more than ten hours of training, but the amount of participants with this type of training was only 11 out of the 182 participants in the survey. Possibly the most interesting finding of this survey was that teachers with higher levels of education had less positive ideas and feelings about inclusion in their own classroom than did educators who had not completed a master's degree. However, the few individuals that had experience and training in special education were shown to have a more positive view of inclusion. The perception of students with disabilities may play a big role in the number of educators participating in inclusive classrooms and shown by the results, the more pre-service educators learn about students with disabilities and

spend time with the population, the more positive their outlook on inclusion will be (Stoler, 1992).

One of the main factors in choosing between inclusion and education in special education classrooms is the appropriateness of the general education classroom for the student with a disability. The idea of appropriateness comes from the *Individuals with Disabilities Education Act* (IDEA), which is federal legislation originally passed in 1975 that mandates students be educated in the Least Restrictive Environment (LRE). The appropriateness is best described as the climate of instruction, rather than the location of instruction. Some goals of inclusion associated with IDEA are to promote a positive self image of the student with a disability, to encourage social interaction between typically developing students and students with disabilities, to give the student with a disability the most “normalized” environment possible, and ideally create an environment where everyone involved will benefit from the arrangement (Kiefer-Boyd & Kraft, 2003).

There is a need for models and procedures to help successfully include students with autism and other disabilities in general education settings. Various strategies have been proposed to help inclusion be successful, and one of the main and overarching themes for this success is collaboration. General education teachers assume most responsibility for working with ASD students who are included, but some of the collaborators involved should be psychologists, social workers, speech and language pathologists, special educators, occupational therapists, physical therapists, and counselors. The combined efforts of all these individuals increase the potential for successful inclusion (Simpson, de Boer-Ott, & Smith-Myles, 2003). Also important is the recognition that students with autism and other disabilities should be diagnosed as early as possible in order for successful educational intervention to occur. Children



should have access to a team of interventionists from infancy, if they can be diagnosed, in order to ensure they will have the best opportunity at successful inclusion and normalcy in their education (Godek, 2008).

One of the common supports for students with autism in the general education classroom is the use of paraeducators or paraprofessionals (parapros). Research into the use of paraprofessionals (or “student aides”) to support students with disabilities is mixed. Guay (2003) suggests that paraprofessionals do not usually have enough training to educate students with individualized needs in the art classroom and they may even diminish learning experiences and disempower students. Another study by Burdick and Causton-Theoharis (2008) also suggests that student aides can interrupt authentic learning. However, this study provides evidence that paraprofessionals have the power to ensure access to students and support learning that follows the teacher’s curriculum. Such aides are often a very meaningful part of the learning environment, and can have a significant positive impact on how and what the student learns. The most challenging part of the use of paraeducators is that teachers do not often know how to utilize the help of these individuals, and frequently let the paraprofessional take the reins too quickly and too often (Guay, 2003). In the art classroom it has been found that paraprofessionals can be a force that either allows or denies authentic art learning and production. They can support the authentic art learning of the student by following the teacher’s curriculum and helping apply lessons and instruction to the level of learning of the student, rather than to alter the project completely so it is easier for the student to accomplish. A positive experience also occurs when parapros create art alongside of students in order to provide an example, rather than taking over an art project a student is working on. There are many important and subtle considerations to be made by paraeducators in the art

classroom, and more cooperation is needed between educators and paraprofessionals in order to ensure proper educational interaction with students (Causton-Theoharis & Burdick, 2008).

#### **METHODOLOGY: THE CASE STUDY**

In planning for thesis research, it can be difficult for the researcher to decide on a methodology best suited to their study. It is important to consider the population involved and the questions asked. In my own personal search for a fitting methodological path, I had originally expected to be describing my study as an ethnographic case study. With further research into other methodologies, as well as some guiding words from my advisors, I came to the realization that rather than to focus my ideas on ethnography, I needed to look deeper into what a case study is and what type of researcher implements a case study investigation.

In Pamela Baxter and Susan Jack's *Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers* (2008), The authors demonstrate the reasons for using case study methodology and recommend the method for individuals looking to answer "how" and "why" questions. The authors also offer advice to the novice researcher about how one must be careful not to manipulate the behavior of those involved, and have the desire to document contextual scenarios in order to better the understanding about a phenomenon or the context itself. The authors also express the need for the researcher to bring appropriate limitations to the study so there are concrete boundaries regarding how and what needs to be researched (Baxter & Jack, 2008).

Case studies can be implemented in a multitude of ways. There are a number of specifically named styles of case study methodology and each is open to interpretation.

All types of case studies typically involve longitudinal research, which means that the same group of participants is observed over a period of time (Davey, 1991). This is the approach I took in my study at VSA Texas, as each group of students was at camp for two weeks and most of the students involved were present for both sessions. I was able to secure the in-depth examination and gather data I needed for a successful look at my case study in a longitudinal manner.

Lynn Davey, in her article for *ERIC/TM Digest* about the application of case study evaluations cites six types of case study evaluations. These are: (a) Illustrative case studies, which tend to illustrate a situation to give the reader more insight about a program; (b) Exploratory case studies, which are almost a precursor to a larger study and undertaken before a more in-depth investigation to help gain a better understanding of the direction the study should go; (c) Critical Instance case studies are an option for a researcher who wants to examine a specific and unique interest rather than attempting to generalize the situation; (d) Program implementation case studies are used to decide whether or not the program in question is following the original goals and intents of the project; (e) Program effects case studies can be used to determine what effect the program has on the intended population. This can also help explain the relative success or failure of a program; and (f) Cumulative case study. The cumulative aspect implies that the researcher uses information from several different sites to gain a conclusion (Davey, 1991).

Other authors and philosophers of methodology have listed various types and names for the kinds of case studies available. For example, Davey (1991) lists the types above, while Baxter and Jack (2008) record completely different types of case studies, such as: Explanatory, Descriptive, Multiple-case, Intrinsic, Instrumental and Collective.

This study is best described as an Illustrative case study (or as Baxter and Jack list it: Descriptive), because it is very descriptive in nature and it helps to enlighten what a working UDL curriculum looks like. I set out to show the reader what a working UDL curriculum is and how it can be used in inclusive education, while providing an example of what future art educators can do with their students to ensure that the learning experience is as enriching as possible.

### **TECHNOLOGY, ART LEARNING AND AUTISM**

With the ever-evolving world of technology, students with ASD and other disabilities have more options and opportunities regarding how they learn. VSA's New Media Arts (NMA) project involves computer technology as well as other technological means for art making. Technology and computer supports have been found to be effective ways of implementing instruction as well as improving social communication for students with autism. The form of visual media utilized may be important because of the way students with autism think. When instruction and student activity schedules are presented on a computer with visual supports and cues, the ideas may be seen as more concrete. Students with autism are more likely to understand this type of instruction rather than spoken or signed language, which can be fleeting. Some individuals with ASD actually prefer this type of instruction, and it may be especially effective when combined with notebook format materials as well as teacher instruction (Stromer, Kimball, Kinney, & Taylor, 2006).

Another reason why computer and technological methods may be beneficial for students with ASD is that these students are usually uncomfortable in environments that are social in nature. There is evidence of language skill improvement with the use of technological supports in the form of increased vocabulary, improved receptive language

skills, expressive language skills, and some social skill improvement (Wainer & Ingersoll, 2010).

Even though the field of computer-aided learning is well accepted in ASD interventions, the field has not been fully explored to its potential. Moore, McGrath, and Thorpe (2000) suggest that future research is needed taking into account the core impairments associated with ASD. The authors suggest research addressing computer-aided learning with a focus on social impairments, communication impairments and the inflexible thinking that individuals with autism commonly experience. The authors believe that computer-aided learning can be especially effective in teaching students with ASD about rules. Also, they suggest that computers be used for the gateway to literature that current technology provides. Individuals with Asberger's syndrome can typically become fixated on one thing or another, thus the ability to find literature on their interest may expand current knowledge and enable greater learning to occur (Moore, McGrath, & Thorpe, 2000).

Conversation skills are always important to build for individuals with autism since half of all individuals with ASD do not develop verbal language. Computer technology can be a mode of instruction that enables active participation. The multimedia aspects are important for students seeking options when learning, and current technology using an animated agent has also been found to be effective in increasing conversation skills. One study created and evaluated a program using an animated agent to demonstrate spoken language so students can both see and hear language at work. The animated agent was found to be more effective than students learning from a real life teacher, because the animation is a more static image and only portrays the facial expressions and movements required to speak. This control is effective for students with

ASD so they can concentrate on learning what is most important in a visual manner rather than being distracted by the intricacies of real life spoken language (Bosseler & Massaro, 2003).

In cases where student conversation skills are more advanced and the individuals do not need a simple animation to get started on their conversation skill building, the use of digital video has been found to be a quick and positive intervention. The modeling available in the use of video is helpful for students to have a visual aid of seeing either themselves or another individual model language use. This type of modeling can help students see what is appropriate when answering questions and having daily conversations (Sherer, Pierce, Pardedes, Kisacky, Ingersoll, & Schreibman, 2001). In the New Media Arts class with VSA we had the opportunity to use video artistically. This method of expression was helpful for students to see examples of themselves expressing emotions as they acted.

## **UNIVERSAL DESIGN FOR LEARNING AND ASSISTIVE TECHNOLOGY**

Universal Design for Learning (UDL) often involves an abundance of technological supports similar to those listed above. The idea for UDL originated from the notion of Universal Design, which applies primarily to products, buildings, and environments. This form of design accommodates individuals with various environmental needs. For example, following a Universal Design Initiative, buildings must have wheelchair ramps and Braille signs, and television programs must utilize visual display captions. UDL extends the Universal Design concepts to include learning environments and curriculums that account for different individual needs. Even though the ideas of UDL are drawn from architecture, the principles for it are based on research

in education psychology, cognitive science, and other learning sciences (Rose & Gravel, 2010).

The development of UDL is usually attributed to Colten Rose, Anne Meyer, and their colleagues at the Center for Applied Special Technology (CAST). The principles undergirding UDL were developed following the reauthorization of IDEA in 1997. It was near this time that inclusion was becoming a significant topic of conversation and the professionals at CAST were particularly interested in finding ways of ensuring access to curriculum for all students in the general education classroom. It was soon thereafter that CAST introduced UDL at the Office of Special Education conference. At this time the topic and associated materials became popular and more available. The concepts of UDL were focused on the movement away from a rigid curriculum and toward the belief that through universally designing lessons all types of learners can participate in general education classrooms successfully (Edyburn, 2010).

The three main principles of UDL are: Providing (a) multiple means of representation, (b) multiple means of action and expression, and (c) multiple means of engagement. Utilizing the three primary principles of UDL, nine guidelines have been developed to assist teachers in their curriculum development intended to address the range of various learners. Some of these principles involve physical action, expressive skills, and options for self-regulation (Rose & Gravel, 2010).

Art teachers in inclusive classrooms may feel burdened when they have a variety of learners in their classroom, but with UDL the burden is no longer on the teacher alone because the curriculum is designed to accommodate each student because the curriculum is flexible when the teacher needs it to be. In order for a working UDL curriculum to

function, training of educators is of overriding importance in order for proper curriculum development (Ender, Kinney, Penrod, Bauder, & Simmons, 2007).

In the art classroom, some important parts of UDL that Margaret King-Sears (2009) mentions in her commentary published in *Learning Disability Quarterly*, are the flexibility in the use of UDL, its equitable use, the perceptibility of information, tolerance for error, the simplicity and intuition involved, low physical effort, and consideration for the size and space for approach and use. The following information addresses each of these qualities individually.

The flexibility in use refers to the design to accommodate a wide range of abilities. This can be achieved in the employment of virtual demonstrations with assistive technologies, the utilization of simple and explicit verbal language, and providing students with a multitude of choices in the way they can complete the assignment. The pedagogy involved in the flexibility of UDL can either help or hinder the learning of the students.

Equitable use of materials can be tricky in the classroom when working with a textbook. Frequently original instruction materials have to be supplemented, altered, or scrapped altogether. The materials introduced in a UDL curriculum are very important because some students may only be able to understand one method of instruction; therefore, all materials provided should be the highest quality and give each student the best opportunity to learn and to succeed.

The perceptibility of information has to do with the use of different ways to present curriculum content. The use of illustration, tactile experience, text, and clear verbal language are all ways of clarifying the perceptible information.



One part of UDL that some users do not often consider is the tolerance for error. In some of the software design for learning, when students answer incorrectly, they will simply get a “try again” message or an “incorrect” message on their computer screen. In universally designed learning software the message after a wrong answer may provide information reminding students of the steps involved in the problem asked so they can better understand where they went wrong with some support and direction to answer correctly on the next try.

The subsequent factor connecting to the previous feature is the importance of simple and intuitive instruction and lesson plans. When designing lessons, the content should be straightforward while also considering the student’s individual background knowledge, their use and level of language skills, and understanding as well as their ability to concentrate and stay on task.

For some students, the difficulty may not lie with cognitive issues in planning. Some students with physical disabilities need special consideration regarding the level of physical effort involved in the lesson. This is particularly applicable to the art classroom, which can be very physically involved. The level of comfort of art projects for some individuals is important and in this case some physical assistive technologies can be used, some as simple as taping down the paper to the table, or propping up the drawing/painting surface so access is more comfortable.

King-Sears (2009) notes that the most overlooked or violated principle of UDL in the classroom is the size and space for approach and use. She discusses this principle in terms of viewing material on a PowerPoint or by way of projected images. This environmental issue also applies to students with hearing problems or individuals with difficulty concentrating. If the problem is sight, one way to aid the students is to give

each individual a personal copy of any images or text displayed on a projector, while considering the font used and the contrast of the image. Small changes like these can make a big difference in the classroom, and access to information can be attained for all types of learners through consideration of these principles of UDL (King-Sears, 2009).

In Dave Edyburn's article (2010) entitled "Would You Recognize Universal Design for Learning if You Saw It? Ten Propositions for New Directions for the Second Decade of UDL," some problems and potential new directions for UDL are suggested. It seems that we are stuck in a place with UDL where teachers do not have enough access to learning materials and means to implement UDL curriculums fully and correctly. Edyburn provides an example of the use of websites in the classroom. Since most websites do not have audio access, the student who may not be able to see the words or read them would have to copy and paste the text into a text-to-speech program, which takes any imported text and generates an audible version of the words, in order to learn from the website. Some other issues that Edyburn addresses are the fact that some teachers implement UDL similarly to Universal Design. The two are fundamentally different and educators must consider the fact that learning interactions are far more complex than architectural interactions. Another problem that occasionally arises with UDL is that a number of individuals believe that UDL is just good teaching. Some teachers, when introduced to UDL, may misunderstand or miss altogether the fundamental design aspects of proactive design to value diversity within the general education classroom. This type of misapprehension about UDL can be minimized if the definition of UDL is more clearly portrayed to teachers and if the implementation of UDL can be measured, to support a view that UDL outcomes are better than "just good teaching" (Edyburn 2010).

Some teachers also have the tendency to become confused with the level of assistive technologies involved in UDL curriculums. Assistive technologies can range from more obvious adaptations, such as the use of a wheelchair or modifying a writing implement, or complex technological equipment such as sensors that recognize eye movement for communication purposes or use of computers. IDEA (2004) defines assistive technologies as almost any item, equipment, product, software, etc., whether commercially acquired or modified, which improves the functional capabilities of a student with any disability (Messinger-Willman & Marino, 2010).

Assistive technologies are assigned on an individual level and are tailored to the certain needs or disabilities of a specific student. UDL, on the other hand, is designed and instructed to all the students. It is commonplace that UDL curriculum and assistive technologies are used in the same environment, but UDL is meant to reach all students while assistive technologies are assigned in a more individualized way (Edyburn, 2010). More educators are learning how UDL can be complemented by assistive technologies so that students with learning disabilities have an enhanced education. Members of the student's IEP team have the responsibility of considering assistive technologies under the guides and expectations of IDEA. Different methods used in UDL can be seen as assistive technology when applied on the individual level. For example, it is commonplace in UDL to accommodate all learners by using multiple instructional methods such as providing text handouts and images supplementing a PowerPoint lesson. But when only one or two students have access to supplemental materials in the curriculum, the curriculum design cannot be categorized as UDL. The primary way to differentiate assistive technology and UDL is to remember that assistive technology is

specific to individual learning, while UDL is a holistic curriculum approach (Messinger-Willman & Marino, 2010).

There are four steps needed in order to successfully account for individual needs of assistive technology. They involve the pre-assessment of the individual student, discussion between the student's IEP team members, effective implementation of the technology, and evaluation of how the assistive technology is working for the student. Teachers also play a large role in the successful use of the technology because they must be aware of how and when the student should utilize the technology in order to enhance their curriculum. Like with UDL, assistive technologies are not always properly understood and implemented in the general art classroom. Also similarly to UDL, most of the problem lies with the level of education and understanding teachers have of the technologies or curriculum. Sometimes even special educators do not have the fundamental knowledge needed for the assistive technology in order to correctly implement its use. One cure for this lack of knowledge and education could be the improvement of professional development. The number of opportunities for professional development are few and this could be a key to the improved and increased usage of both assistive technologies as well as implementation of successful UDL curriculums in the general art classroom (Messinger-Willman & Marino, 2010).

Edyburn (2010) suggests that UDL be evaluated regarding its success found in enhanced student performance. The evaluation of students when using UDL can become tricky when attempting to standardize evaluation in a curriculum that is based on the movement away from standardized learning. In order to encourage more teachers to use UDL curriculums, perhaps it is needed to find a way to accurately measure the positive

effects on student achievement and present viable options for student evaluation with the use of a UDL curriculum.

## **EVALUATION AND RUBRICS**

Accurate evaluation in the arts is often a difficult task to accomplish. When working with students with disabilities the difficulty of assessment increases dramatically. It is important for educators to be able to support the worth of their program by way of assessment, due to the fact that many art programs are losing their funding. Rubrics are a common tool for use in evaluation, and they could be a practical option for the evaluation of students with autism. Language use, problem solving, academic competence, and cultural competence are all subjects that can be assessed through rubrics in the art classroom. To aid in demonstrating art education's worth for students with disabilities, these topics, as well as other multi-disciplinary subjects, can be integrated into art rubrics measuring achievement in the classroom (Mark & Steedly, 2006).

Rubrics have the potential to be a very strong form of evaluation due to the fact that the results are explicit, and those involved are usually aware of the criteria being tested. To ensure validity, students should be provided with a clear goal, the opportunity to help define work that is high quality, feedback from educators to describe performance, and finally the opportunity to adjust their work once the evaluation is completed. If all these are considered, using a rubric that is well designed and tailored to the project and the abilities of the students, there is a good chance for an accurate reading of improvements and performance (Mark, Steedly, & Thormann, 2008).

Another potential method of evaluation may take into account the effective nature of technology. NimbleTools is a research-developed computer-based test delivery system that has been found effective in the evaluation of students with disabilities. NimbleTools incorporates the values inherent in UDL by including different scaffolding tools available to all students as they take tests in the program. Each student has the option of using all the tools and can choose when and how they decide to employ them. Traditionally, with pen and paper tests the accommodations were limited to change in font and print size, extended time, the use of a proctor or other environmental changes to help the student in the test-taking process. Some of the benefits that NimbleTools offers, in addition to font and size of print changes, are the audio presentation of the printed material or the “Read-Aloud tool,” a customizable magnification tool, as well as a digital calculator. While developing NimbleTools, research was conducted in order to see which features students particularly enjoyed or used more frequently. The software was designed to be able to record what tools are used, and focus groups were held to collect feedback from the students on which parts of the programming they found most helpful. Some of the students who participated in the focus group shared that they liked the magnification tool as well as the “mark for later review” tool so they could go back through the test upon completion to revisit questions they found challenging or unsure about their response (Russell, Hoffmann, & Higgins, 2009). This type of test taking is not as common in the art classroom, yet it may be used in the future for art educators to assign self-assessment evaluations or other appropriate class evaluation.

These topics and resources included in this comprehensive review of literature are important to inform the reader about my study. The resources included are invaluable to

understanding the basics of inclusion, UDL, autism, evaluation, technology, as well as other aspects of the study reported here. Next I present a description of the NMA program at VSA Texas as well as brief biographies of the participants involved, in order to demonstrate the personalities of the participants and contextualize how they interacted within the UDL curriculum environment.

### **Chapter 3: Environment: *Program and Participants***

This chapter provides an extension of previous information given in the introduction about VSA Texas, the New Media Arts program, and Universal Design for Learning (UDL) information. Some background biographical information is also provided for all individuals directly involved in the daily program activities. This biographical information is included to orient the reader to the personalities and interests of the participants. With this information, the data presented on the aspects of the New Media Arts program that worked successfully, as well as the aspects that did not work as well, are put in to a more complete and descriptive context.

#### **VSA TEXAS**

I was fortunate to be able to establish a connection with VSA Texas to conduct my research. VSA Texas is a branch of the international VSA organization and is a not-for-profit group focused on combining art learning, production, display, and other artistic opportunities for individuals with disabilities. The community aspect of VSA Texas is very important, and through their Access Gallery, art classes and other VSA Texas events the organization connects individuals with disabilities through art in Austin. The program actively serves about 10,000 individuals with disabilities in Austin each year, and many other individuals in the surrounding community are affected indirectly by VSA Texas's programming. VSA Texas supports local artists with disabilities by displaying their work in an online gallery, and if an artist chooses she or he can apply and potentially be accepted to show their work in the Access Gallery, which is open in Austin five days a



week. This gallery is an impressive source of empowerment for the individuals whose artwork is accepted to show there and provides a valuable experience of exhibiting work and gaining artistic exposure ([www.vsatx.org](http://www.vsatx.org)).

Throughout the duration of my study into the NMA program, I worked directly with Dr. Carol Stensrud who coordinated the project, other volunteers in the program, and Celia Hughes, VSA Texas's executive director. The energy at VSA Texas is very positive and exciting; it is obvious that everyone involved in VSA believes truly in the mission of this organization.

The facility that houses VSA Texas is called the AGE building and is located at 3710 Cedar Street, in Austin, Texas. VSA Texas rents space in the building and the various rooms utilized function as the main office for VSA Texas, supplemental office space, and VSA Texas's classroom. The building also houses other non-profit organizations, some also focused on providing services to individuals with disabilities. Though the building rents much space, the main function of the building is to serve aging individuals in Austin with services like adult day care. The VSA classroom appears as a very typical classroom with white boards, tables, chairs, and some desks. The ceilings are very high, and the room feels large upon first entering. As it turns out, we could have used some more floor space in the classroom for students needing better wheelchair access. The bottom half of the walls are covered in carpet, helping to reduce the noise in the space and potentially make a safer environment for students. There is a cupboard full of art supplies and the students have access to reference materials in the form of books, magazines, and Internet access. There is also a large cabinet space in the room that the students used to store their personal items and lunch boxes in during class. There are a few computers that students and staff used for making slide shows, accessing the Internet,

social media websites, and any other needs the class had. Carol had the goal of running her classroom in the same style that a community college classroom might be managed. The environment is very scholarly and imaginative with engaging tools available for creative expression. Carol chose not to keep a teacher's desk to sit behind, and pushed the desk provided against the wall to create more floor access. She used the space to keep her paperwork and personal items, but she situated herself primarily with the students and volunteers communally.

In my own education I enjoyed venturing outside the classroom for learning. Carol felt this activity was also important for this group, and she often brought the students to environments outside the classroom. Whether going outside on the lawn for a retro car photo shoot, or meeting at a local café for the planning stages of projects, we were not confined to the physical classroom space.

#### **NEW MEDIA ARTS PROGRAM**

The two different NMA courses offered in the summer each lasted two weeks. We met Monday through Friday 10:00 am to 2:00 pm. Some students were dropped off daily at 9:30 and picked up at 2:30 due to the contract that VSA had with their group home on how much service VSA Texas would provide per day. Each course cost \$350 to attend, but varied scholarships, payment plans, and sliding pay scale for cost were considered. Some of the goals of this camp were to improve student skills in video, photography, and editing, as well as introducing them to social media (facebook, and new email addresses for those who came to camp without one). Also, when the group took field trips or other outings we had the goal to improve community-traveling skills. These

skills involve things like riding the bus, planning the trip on the Capital Metro website, paying for a day pass for the bus, going out to lunch, and participating in community activities like visiting an art gallery or museum.

The students involved in the course were all present due to their prior diagnosis of Autism Spectrum Disorder (ASD), and were either contacted directly through VSA Texas, or found out about the program independently through the VSA Texas website. The students also had common interests in new media, and signed up for the course not only because of their ASD, but also because of their interest in learning new artistic techniques in digital photography and film.

The New Media Arts class was able to take place due to a grant that Carol and VSA received. This grant enabled VSA to provide the resources needed, such as digital cameras, flip cameras, and traditional art supplies. The main goal of VSA was to create a UDL curriculum of eight different class sessions that could potentially be distributed and recreated in other settings to help educators working with individuals with autism learn how to implement a curriculum for learning art in newer media forms. The main framework of the curriculum focused on accessibility to all students and management of equipment, while keeping in mind the desired considerations and instructional options aligned with UDL principles.

It was also very important in the NMA class that traditional art making be incorporated into the curriculum. The students are motivated by traditional art materials because of their previous exposure to them, and this excitement can be transferred into using new tools and media for art making.

## **ASSOCIATED UDL PLANNING**

Since Carol is an experienced user of UDL curriculum, this portion of the NMA class came easily to her. UDL was a big part of the grant she and VSA Texas received, but her main focus of the class was the New Media part of the NMA class. Her vision was to make a curriculum applicable and easily recreated using UDL guidelines and supplemental materials. The finalized curriculum of this program has detailed UDL steps to take into consideration while implementing the curriculum.

For most class sessions, we were each given a detailed timeline schedule of the planned happenings of the day. This was more helpful to some students than to others, but the point of providing materials such as detailed schedules is to ensure that those who might benefit from them have access to such materials. Some of the other common UDL steps that we used without having to pre-plan too much were modeling activities when teaching students how to use equipment, and segmenting activities into steps and providing the steps using multiple means of representation. These means of representation often came in verbal teaching, text handouts, teacher modeling, and visual representations on handouts. The UDL used in specific activities is described in Chapter Four.

## **STUDY PARTICIPANTS**

### **Educators and Volunteers**

#### ***Carol, age c. 58, female***

Carol was the teacher and the program coordinator of VSA Texas' NMA course. She has worked with VSA Texas for some time and is passionate about art, education, and individuals with disabilities. She expressed to the class that she has a mild learning

disability (Dyslexia) and can empathize with the students because of this. She hasn't been at all hindered in her success by her slight disability. She is an accomplished artist, educator, and scholar. She holds a PhD and has taught at the university level. Carol's energy is infectious and she is very fun to work with. She likes to joke, have fun, dance, and goof off with the kids.

***Rick, age c.55, male***

Carol was lucky to find Rick for his assistance with the photography portion of education in the NMA course. The two met at a local coffee shop in Austin, and since Rick is a retired photographer, he thought this would be a fun opportunity to work with individuals with unique needs and to spread his knowledge and passion of photography with a younger generation. Rick was also a very good sport during camp and liked to get silly with the students. He enjoyed the crazy times with us when we decided to unwind by doing the limbo in class. Rick was also quite adept at putting forth the effort to connect with students on an individual level. He especially took Ben under his wing due to their similar interest in music.

***Alicia, age c. 27, female***

Alicia was a temporary employee for VSA Texas and was hired the first day I got to camp, to specifically work on the NMA project. We started out in similar positions and came from comparable backgrounds. She also received her Master's degree at The University of Texas at Austin. Her degree was in theatre. However, I may have had slightly more interest in and experience with the population that we were working with, but she engaged effectively with the students. She is a sweet person, very responsible and aware of the needs of the students and not afraid to get her hands dirty and help out

with all the fun activities we had going on during camp. Throughout Alicia's work with VSA she was in charge of office tasks and paperwork and kept us all on track during field trips by helping keep the planned schedule on track. Alicia also played a major role in compiling the curriculum materials at the end of the program.

***Myself: Abby, age 25, female***

I have a background in fine arts due to my undergraduate degree in studio art. My focus in school was printmaking and I most enjoyed spending time with the students when we were making artwork with mediums such as paint, pencils, pastels, etc. I was in charge of some general housekeeping work at camp, giving students individual assistance, and providing my support and knowledge to Carol throughout the duration of camp.

**Students**

***Mark, age 18, male***

Mark was one of my favorite students in the first session of camp. Individuals with autism sometimes tend to focus or even obsess over a certain thing. What is most intriguing about Mark is that his obsession is art! During the program he had a constant need to have pencils/markers/paper, as well as his iPhone in front of him. He used his phone for reference photos of the images that he was creating. Mark is most interested in dinosaurs, dragons, panthers, cheetahs and many other African, Medieval, or fantasy-type animals. His photography skills were exceptional when using both his iPhone and a camera. The only real evidence to show that Mark has a disability is not when looking at

his art, but when you are interacting with him. He has a hard time listening to instruction when he is not given one-on-one time with the instructor. I often sat next to him and asked him to pay better attention, but these instructions were often not heeded when he had any artmaking implements in front of him. He also usually had his headphones on and was either listening to YouTube videos or music. He is a very animated individual that needs to have stimulation in order to feel comfortable.

It was especially impressive that Mark was pursuing his artwork beyond his time at camp and with doodles. He sells his artwork in VSA Texas' Access Gallery and even has a [www.deviantart.com](http://www.deviantart.com) website. This website is used by artists who want to post their work publicly in folders where others can sign on to give and receive comments. He is very competent using the website and I was able to witness him working at the Apple Store when we were on a field trip learning how to make slide shows. We had a few minutes to spare since he already knew the steps involved to make a slideshow, so on his own he decided to do a little housekeeping and organize his website.

***Scott, age 18, male***

Scott was difficult to get to know at first when he came into the program late. He missed the initial days of camp. Scott already knew some of the other students, so he did not need much help getting with the group. Scott has both physical and intellectual disabilities and he was one of two students in both programs that we made accommodations for wheelchair access.

I had the opportunity of walking/rolling with Scott on the way back from our field trip to the Access Gallery and café next door. We sat together at the café discussing his future plans for his final project, which he seemed excited about including a theme, music and accompanying text. He was very motivated to tackle all the options we gave students

regarding the project. From the discussion in the gallery, as well as our walk back to the classroom, I learned about Scott's interest in music and war issues and his desire to "get out" his feelings in the form of a film about war. He was interested in exploring the idea of a futuristic story line in the 2030s, where he planned to explore the idea of current countries becoming allies. Scott had already planned out the different military branches, the weapons they would use, and who is eligible to be in the Special Forces. He seemed particularly fixated on who would be in charge of collecting and cremating the soldiers who died in battle. I started the whole conversation with him after I overheard him talking to himself about soldiers and cremation, and how to dispose of the dead. His ideas are very graphic and specific.

Scott's competency with technological methods of making art was more advanced than most of his peers. He had previous experience taking pictures before he started the program. Scott has some difficulty with the dexterity of his hands and arms so he does most of his creative work through the directing of an aide. Like Mark, Scott has his own website where he shares his electronic music that he makes independently. He is truly a musical artist.

***Nicole, age 24, female***

Nicole is one of the students with milder symptoms of ASD. She is very social and participates willingly. She does need a little social cueing at times and has a tendency to get short and direct in her conversations with others when they do not agree with her way of doing things. This side of her comes out most often when she is interacting with Chris who lives in the same group home. I asked Nicole about their seemingly tense relationship, and she attributed it to the fact that they spend so much time together and their quarrels are similar to brother-sister spats. She also has the need to be



very independent all the time. I think since she has so many staff members around her all the time she wants to break free when she gets the chance. She often left the classroom to talk on her phone or to take a walk. Another example of her need for independence was when we went to the mall to visit the Apple Store. She left the store on a couple of occasions to go shopping on her own. It was sometimes difficult to get her to be part of the group and do the activities we had planned.

Nicole can also be very clingy. Alicia, another volunteer, and I seemed to be the individuals she wanted to get close to and befriend. On our bus rides to and from the mall she wanted to sit close to me, and make sure that when we got back to class we could work together on the photo projects. She asked me a number of times if I would participate as her model. She also asked me for my phone number, wanted to potentially hang out together on the weekend, and wanted me to attend her birthday party. I think it must be hard for individuals who live in a group home to get out and socialize with individuals outside of their daily interpersonal interactions, and she was trying to take advantage of the opportunity she had to make more connections and friends.

Something artistically promising of Nicole is that she is particularly interested in photography. She joined the first session of camp because she wanted to further her skills to potentially have an opportunity to attend community college and study photography. Since her participation was spotty it is difficult to see her potential in photography. Hopefully, she will have more opportunities like the one provided with the NMA class, so that community college can be a reachable option in her future.

***Ben, age c.19, male***

Ben is one of those individuals you might not know how smart he is unless you spend a long time getting to know him. Ben is mostly non-verbal and has a computer that

he is able to use to communicate, and also complete any other actions that one can perform on a laptop. Ben was one of two individuals in the first session that had an aide with him at every class session. The aide was only there for Ben because he has some mobility issues. He can walk and move on his own without the support of a wheelchair or crutches, but is more stable when there is someone to lean on. Ben's aides were also much more adept in knowing what Ben wants when he does verbalize sounds. I think this is because they have had a lot more time getting to know him and more practice recognizing his verbalizations. Most days, however, the aide that came to class with Ben sat in the corner and read his book.

Ben is very interested in music. He is a Beatles "freak." He probably possesses every song ever released by the band and came to class each day wearing a different Beatles shirt. When we went to the Apple Store to learn about slideshows, Ben, with the help of his aide, made a slideshow of the images that we took at the first photo shoot we did of a '50s style car. Ben chose the images and accompanying music, which happened to be the Beatles song *Drive My Car*. He also entitled his slideshow by the name of the song.

Ben's skills, upon arriving at camp, were somewhat difficult to determine. He has some trouble with hand dexterity, and cannot hold a camera to take pictures very well on his own. With help supporting the camera and framing images he does fine, and when discussing what type of pictures he is taking with him he understands, but his physical independence is lacking.

Something I learned about Ben a little late in my time at camp was his interest in disability rights. I heard through the project coordinator that he had recently written a paper about the Americans with Disabilities Act (ADA.) Things like this are difficult to

get to know about Ben by assisting him in class, but I could tell that there was much more depth to him and his personality than what I had access to in the short time span of camp.

***Chris, age 19, male***

Chris is another one of the more high functioning students in class. The symptoms of ASD that Chris presents are some difficulty and abnormalities socially, as well as some shakiness of hands, which I believe is due to a medication he takes. Chris is very talkative and interested in being involved in everything we do in class. He was one of the most engaged students in the program and was very enthusiastic about getting to know how to make better use of the camera. Particularly on the trip to the Apple Store, Chris had a camera in hand every step of the way taking pictures of popular restaurants we were passing, sculptures he thought were interesting, and even taking pictures of friendly strangers who volunteered. I think what he enjoyed most about the program were the interactions he had with other individuals. He is good at including others who might often be left out, and taking any verbal flack that Nicole might throw his way.

Chris is not a self-proclaimed artist. I am not sure if he actually comes to camp to make the most of the art making opportunity, but he has been creative in the past through other experiences with VSA and made some friends through the programming. One interesting thing to know about Chris is that he dreams big. He hopes to one day open his own mall where he will be the landlord of all the other stores. Within the mall he wants to open his dream store that sells a vast variety of plants. Chris has a very strong interest in horticulture and claims to have a “green thumb.” He takes classes on horticulture and is eager to talk about the process of planting, propagating, and selling his plants. He let this interest dictate his final film project in camp number two, where his film was entitled “Green House.”

***Jacob, age c.20, male***

Jacob was a real treasure to spend time with at camp during the summer of my research. Jacob has ASD combined with another disability called echolalia. Echolalia is a condition that is symptomatic with repetitive behaviors of others. He repeats both words and gestures that you make when having a conversation with him. He is almost non-verbal but you can understand when he says things like “good,” “cool,” or “no.” He is good at following instruction and was able to take some successful photos independently. I learned during the program that Jacob is an accomplished horseback rider and competes in riding tournaments regularly.

Jacob does need a lot of support in the classroom, but I think he improved in his interaction with the other students as they got to know him better. He also did well in the Apple Store with the devices they have there, since he uses his iPod touch regularly for an application (app) for communication. His camera skills were far better on the iPod than they were with an actual digital camera. If he had more experience with a camera such as the one we used, I think he might have had more successful photographic outcomes with that particular technology. However, we were able to use his iPod and download pictures from it for his projects. Since Apple products are designed to be intuitive, I believe they might be better suited for individuals with disabilities, rather than the products manufactured by other companies.

***Colten, age 29, male***

Colten was a student involved in the program that was technically not signed up to complete projects with the rest of the class. Carol occasionally chooses students who will become her teaching assistants or classroom assistants. A big part of Colten’s involvement was that he was there to help keep the classroom clean of trash, and he

helped move tables and chairs so that the other students in wheelchairs had access to various parts of the classroom.

Though Colten was not “technically” a student, he was a peer mentor to the others and he also has autism. Like Chris, Colten was a big help in keeping everyone involved by talking to, or helping the students who would tend to end up isolated at times. Colten is a huge University of Texas sports fan. Almost daily he would ask me if I planned to attend any football games in the upcoming season. We talked about the athletes and incoming recruits. He wears a burnt orange hat every day, and loves to talk about his favorite team. I think we connected through sports because of my involvement with UT athletics in my undergraduate career. I competed on the varsity UT rowing team for four years, and through this experience got to know a lot of the other athletes at UT. This connection with Colten was fun, since I still keep up on UT sports and he has such a big interest in the athletic community at UT.

***Alex, age 19, male***

Alex was one of the students who didn’t interact much with his peers. Occasionally, the students who tended to facilitate interactions would talk to him, ask him questions, or express interest in what he was doing. Alex has very limited mobility. He is confined to a wheelchair due to his brittle bone disease. He has both intellectual and physical disabilities, and required the care of a nurse at all times while he was in class. I think the interaction with his nurse hindered his potential engagement with his peers, but for safety reasons the nurse was a necessity.

Alex is a planner. He likes to know what comes next and was always asking, “Abby, what are we gonna do now?” His interest in photography was hit or miss, but what was wonderful about how Alex took pictures was the apparatus Rick designed for

him. Rick affixed Alex's iPhone to a metal limb attached to his wheelchair, so all Alex needed to do to take a picture was direct whoever was steering his chair to frame the image he wanted, and he could gently and safely press the screen to take the photo.

***Kevin, age 21, male***

Kevin is a big rocker. He loves listening to music and singing and dancing along to the music of his favorite bands. He is particularly interested in artists like Rob Zombie, Ozzy Osbourne, and groups like AC/DC. Kevin actually has his own YouTube page where he posts videos addressing his favorite music and even strumming the guitar a little. This technological experience was particularly helpful to him in the NMA class.

Almost every time we had lunch during the second session of class Kevin wanted to listen to his music, and on occasion he brought his guitar to class so he could perform for us. Kevin is quite flamboyant and likes to be on the performing side of filmmaking. When he is acting he enjoys either taking the more fantasy-driven roles or likes to act out British comedy sketches from Monty Python. Kevin was a very fun addition to the second session of NMA.

***Chelsea, age 27, female***

Chelsea was an absolute sweetheart during the second session of camp this summer. She had a prior interest in film and particularly musicals. Her favorite story line in a musical is *Phantom of the Opera*. She was familiar with multiple versions of the story and loved to show us her favorite scenes during class.

Chelsea was one of the more quiet and polite students in class. She usually had input or opinions to give about what was happening during class, but she would be the student to wait and raise her hand or pause until her turn was called to give her insightful

and often positive comments. She was also one of the students in the second session that enjoyed the book-making and drawing/storyboarding part of class. She decided to recreate her favorite version of the *Phantom of the Opera* using reference images from her computer to inspire the 10 scenes she selected to portray. I was very glad to have her creative and positive energy added to the mix of the second summer session.

***Tom, age 15, male***

Tom was the youngest student in both sessions this summer. The way he acted was definitely less mature than his peers in camp. Tom was one of the harder students to get involved in activities. He would often prefer to play a computer game or use his Game-Boy instead of participating in group activities. There were instances during class where he really shined, such as when he was able to produce his own story, casting his own actors and choosing various scenes to shoot.

Tom was also one of the students particularly sensitive to noise disturbances. Many individuals with ASD have extreme sensitivity to noise and Tom had some difficulty handling classes that were noisier than others. The day we had a band come to perform in class so we could film a music video was especially difficult for him because of the loud noise.

This chapter has provided more information about the environment of VSA Texas and the New Media Arts program. Each student has been introduced with a short biography in order for the reader to gain a more full sense of the individuals involved in the two summer programs. This material is valuable to consider with the information from the data chapter (Chapter 5), when describing individual student reactions to

instruction and curriculum design. The following chapter consists of further discussion of case study methodology, both generally and as it is applied to this particular study.



## **Chapter 4: The Case Study: Methodology**

This chapter describes basic notions of what constitutes a qualitative research study, what a case study is, when to use this type of research, and how case studies are commonly applied. I also describe the methods used in this case study with VSA Texas. This chapter provides two views of the case study, both a more general view of the methodology in a macro view, and also a more micro presentation of how I personally utilized the techniques commonly used in a case study.

### **QUALITATIVE RESEARCH**

For this study, I used qualitative methods to answer my research questions. Qualitative research methodology is commonly used in education for professional qualitative studies where mixed methods may be used in educational program evaluations or action research in the field. Qualitative research is usually flexible, and allows for the researcher to develop personalized methods of data acquisition. Ultimately the researcher must be responsible in their data gathering due to the fact that all information will be filtered through the eyes and ears of the researcher. Since this method of research is so adaptable the researcher may choose among many different ways of documenting evidence. The researcher may choose to observe, take photographs, conduct interviews, hand out surveys, or gather documents that are archival in nature or any other source worth considering. Depending on the research question asked, the methods might differ from researcher to researcher (Lodico, Spaulding, & Voegtler, 2010).

There are differing levels of participation in qualitative research including complete participation, participating as an observer, observing as a participant, as well as a non-participant, and being a complete observer. For this study, I participated as an

observer. I was actively involved in the goings on of the program I was working with, while all those involved knew I was also an active observer for my research. This relationship is collaborative in nature since everyone involved is aware of the level of participation and the research taking place. This relationship is important to form early on in order to gain entry into a site and to maintain positive relationships while in the field (Lodico, Spaulding, & Voegtler, 2010).

### **CASE STUDY: A MACRO VIEW**

What is a case study?

A case study is one of many methodologies used in conducting scholarly research. It can be qualitative or quantitative in nature. The need for the case study comes from the desire to better understand different social phenomena. Studies are focused on events or characteristics in real life scenarios. Case studies may vary a great amount in the way they are conducted, and are a more open methodological choice when conducting research (Yin, 2009).

When does a researcher employ a case study?

A case study is typically used when implementing research questions that address the “how” and “why” in a research scenario. Case studies are often used to describe contextual scenarios in order to understand the given phenomenon better, and answer any questions the researcher believes remain unanswered. In a case study, the researcher is meant to have little or no control over results and data found (Baxter & Jack, 2008). The case study is used in a longitudinal manner, which means the study is performed over a period of time with a distinct beginning and end (Davey, 1991).

Depending on the particular type of case study, the researcher can choose from a number of different approaches to research. My study, as I stated earlier, was an illustrative or a descriptive case study. Other options for case study researchers include cumulative case study, exploratory case study, program implementation case studies, among others (Davey, 1991).

Some researchers hold prejudices against case study methodology. One important consideration about case study methodology is that it should be rigorous to undertake. Case studies should not be seen as the easy way out in choosing a method, but depending on the individual researcher, the amount of time and effort can be managed in a way that is appropriately balanced while still addressing the research question. The issue of bias can also be a problem when conducting a case study, and it can be difficult for a researcher to remain an objective participant in the research process. This, of course, is dependent on the researcher and how accurate she or he is in their recording of events, and if they follow established procedures in the study. Also, it is said that researchers tend to generalize the results after participating in one research study with a single case. The answer to this may lie in the definition of a case study itself. A case study is meant to generalize theoretical propositions, to gain more knowledge about a context or phenomena, or to look at a phenomenon through a different lens to discover newer information (Yin, 2009).

How is the methodology commonly applied?

Robert K. Yin (2009) lists six different ways of collecting evidence when applying case study methodology. The first of these is documentation, which can come from a variety of sources such as administrative documents, formal study documents or

evaluations, and articles and news clippings. This type of evidence is stable, can be reviewed repeatedly, is exact when using names, dates or other details, and the coverage of the case can be very broad, assuming that the researcher has access to the documents.

The next form of evidence comes from archival records, such as service records, budgets, maps, or survey data. Similarly to reasons above, there are positives and negatives to the decision to use archival records. The documents are usually precise, and commonly quantitative. One drawback to using archival records is the access to the materials. For some records, the privacy of the records is protected, and the researcher cannot access the information.

Interviews are also a valuable source of evidence when conducting a case study and can be created to directly focus on the issues in the research. However, the researcher must be careful when conducting interviews to not interject their own bias, and be aware that sometimes the interviewee might answer questions to please the interviewer. Interviews can be an excellent addition to a case study, and provide casual insights that might not be revealed using other data gathering methods.

Direct observation is the next source of evidence. While time-consuming, direct observation can get at the heart of the contextual questions the researcher is looking to answer. With an individual observer, like in most cases, it can be difficult to gain the broad coverage needed to completely and accurately document the research context and activities. The researcher must also decide, when observing, the level of their own participation within the setting. When purely observing, the situation can be somewhat inauthentic due to the addition of the observer. Another form of observation can be participant driven, which has the same benefits and drawbacks as direct observation, but the researcher includes themselves in the goings on of the context.

Last on the list of six forms of evidence given by Yin are physical artifacts. This form of evidence might not be applicable for all studies, since the artifacts may not be available at all. But when considering different cultural phenomena, physical evidence can play a very useful role in data collection (Yin, 2009).

### **CASE STUDY: A MICRO VIEW**

In my particular case study, I used a qualitative approach. I feel as though within the realm of art education research, that qualitative measurements and results are frequently an appropriate way to secure and explore data. At times, one may attempt to justify art education in schools quantitatively, because of the concreteness of evidence. Due to the nature of my study and the exploration of UDL, technology, and art learning for students with ASD, a qualitative approach was the better methodological option for this investigation. As stated earlier in this document, I had originally intended to use an ethnographic approach to case study methodology, or to turn my study into an ethnographic study because of my interest in the methodology. Before starting my investigation I was determined to employ a narrative form of research documentation, and I was glad to find out that this narrative direction was an appropriate way to write and express my research process and findings. In deciding which method I would utilize, I used a traditional case study methodology while presenting the data in a more descriptive or narrative way due to my own comfort and style of working through data.

It is somewhat unusual for a researcher using a case study to be as actively involved in the research as I was during this study. Ideally, the researcher would have limited control over the outcomes of the research. I participated and assisted in planning lessons and teaching, thus I was more directly involved in this investigation than many

case study researchers are in their own studies. Since I did not design the UDL curriculum in its entirety, and could not control how students reacted, I believe I kept a safe distance from influencing the outcomes and that my study is still authentic.

Why did I use a case study?

I employed a case study because the population, the program, the specific time constraints, and the topics all presented themselves together as a “case” or as Yin (2009) would call it the “contemporary phenomenon” of the use of UDL in this specific summer program for individuals on the Autism Spectrum. I documented what I found to be useful information about educating the population I chose with the methods presented. Case studies also lend themselves to multiple means of acquiring data. I liked the options available of using interviews, surveys, audio, video, observation, and many other imaginable ways to obtain data for my case study.

The methods I used most were simple note taking, audio recording, and gathering of all curricular materials I could obtain, from evaluations and UDL lessons. The most important part of my research was simply attending the camp and participating, while both passively and actively learning about the students, instruction, curriculum, etc. Carol was able to utilize me during the course because of my prior experience with students with disabilities and the knowledge I was gaining through establishing this literature review.

Every day I went to VSA Texas and learned increasingly more about the students who participated in the program. The more we got to know students individually, the more their reactions to the curriculum made sense, and the more we were able to better prepare for the next lesson. As the program carried on, we were able to anticipate the

individual needs of students and tailor the program so that everyone would get the most from each lesson. As part of the staff that created lessons and prepared for each day, we originally accounted for as many types of learners as we could think of and attempted to create multiple ways of delivering instruction, thus creating an environment for learners with differing needs. However, when considering all we thought might be needed, we still had some adjusting to do after getting to know the students and their individual needs. Sometimes the changes to our plans were simple access adjustments in the arrangement of the room; other times our original schedule needed to be altered for certain students within the moment, depending on the situation. It was very important for us as instructors, planners, researchers, etc. to be flexible. I think this is always a part of case studies, and research in general, because there will always be changes from day to day that one is forced to consider in the moment.

The most used method of data collection that I employed was note taking. I carried around a small notebook everywhere we went, whether we were going on a field trip to a gallery, outside on a photo or video shoot, or taking a short walk to the café down the street to gain some real world social experience while completing course evaluations. I always had my pen and notebook ready to jot down ideas, comments the students made, or moments that I thought I should capture to revisit later in my thesis. I tried to make a basic outline of what we did for the day in short terms chronologically, while taking other notes in between. As time progressed observing and participating in the program, my note taking reduced in amount while still maintaining the important notes about the more special moments I wanted to record while having a conversation with a student or observing something I believed was noteworthy. Sometimes taking notes was a nice outlet for me to have when working with the students. I recall having a

difficult day personally while one of the students was also having a rough day, and in a way it was helpful for me to write down, “Nicole is SO stubborn!” These little notes helped me recall the more evident parts of the participants’ personalities. Sometimes students would ask me what I was writing, which was an interesting conversation to have. At times I would be writing about them, or when my writing was in their view I would write about the goings on in the classroom. When the students would ask me such things, I would honestly tell them that I am taking notes because I want to remember what happens in class. This was always enough information to satisfy them, without revealing too much information about the intricacies of my research process.

I used the audio recorder more sparingly than I did note taking. I decided that audio recording was most important for group settings when we were all circled up, introducing ourselves, talking about artwork, or when I wanted to take a snippet of audio when either Rick or Carol were instructing a student on a one-to-one basis. In particular, I took a few audio bits of Rick’s individual photography instruction to try and capture the experience for my own review later. In a way, I found that I remembered the moments I recorded more so than the ones that I did not record because I was aware of the recording process at the time, instead of just listening and taking information without that added element of data gathering. My sensitivity to what was being said was significantly raised when I turned on the recorder. Audio recording is a source of data gathering I found slightly inferior to notetaking. It was difficult for me, when listening to the recordings afterwards, to feel the same way I did when I was actually present, or even feel the same way I did when remembering the memory of the moment. In all, I found that audio recording was a good way of double checking my note taking, and a useful method for extracting correct quotations to use later.



The last primary way that I obtained data for this study was from gathering curriculum documents, classroom signs, self-evaluation forms, and any other hard copy information I thought might be useable after the on-site research was complete. Carol was especially helpful in this gathering process because she would always forward documents for me to keep for this study. Carol also let me visit the VSA office after the program was over to review the evaluation forms that students filled out. It was important for me to examine the information after the fact so I could take the time to think more deeply about certain considerations like font, image choice, etc. for items used in the classroom setting. The curriculum documents and UDL outlines were also extremely helpful for me to have in my possession. Alicia was a big help to me in this aspect of data gathering because her main assignment during this program was to create an instructive comprehensive curriculum that may be recreated in other settings. After the program ended and she was finished with this master document, she made sure I had a copy of these materials.

I think the experience of going to camp could have been enough data to write a thesis on its own, but I was glad to have the option of employing other methods of gathering evidence throughout my research. I am also pleased and satisfied with my final choice of methodology. The case study showed itself to be an effective way for me to conduct research, and I appreciated the flexibility that was needed throughout my summer research with VSA Texas.

In this chapter I have laid out the basic characteristics of qualitative research in general, and case study methodology. Evidence gathering, observations, and other methods were discussed as valuable options to use in a case study. In my study I was a

participant observer using primarily field note taking, audio recordings, and gathering of curriculum materials used in the NMA program at VSA Texas. In the chapter that follows, I explore the data collected during the explained research process of my time spent at two VSA Texas summer camps for individuals with ASD.

## **Chapter 5: Data and Analysis**

In this chapter the research data is separated into thematic categories. Within each category, the data relevant to the topic is presented and I offer accompanying analysis. This chapter presents information on what occurred during the New Media Arts (NMA) camp, why this information is relevant to my study, and also why these ideas are important to art educators who teach students with disabilities about art with a focus on newer media technology. This entire thesis, and particularly this data and analysis chapter, is geared toward a variety of audiences. Some may find the data presented here to be familiar information. However, research shows that many teachers who enter the classroom perceive themselves as under-prepared to teach students with identified disabilities (Bain, 2010). This information is included here to help assist teachers in such situations.

### **ASD/STUDENTS WITH DISABILITIES AND ART**

As noted in the review of pertinent literature, the utilization of art education with individuals possessing disabilities has been widely supported. While researching the NMA camp, I was able to see firsthand how students with disabilities interact with art assignments, and learn about best practices for implementing programs for the population. During the NMA program, we were able to engage in lessons that utilized new media, which was the focus of the camp, as well as traditional art making methods like drawing and painting.

It was very exciting to see participants become enthused about projects and the new processes they were learning. Some students excelled in the newer media, while

others preferred to draw, apply color, and make paintings. Mark, Scott, and Alex were often the students who enjoyed drawing more than they enjoyed the newer media. These three individuals were a good example for me to see how individuals with ASD will sometimes think visually and readily produce artworks. As indicated previously, Mark has almost an obsessive need to draw at most times, and his interests and thoughts often coincided with the drawings he produced. His work seemed as though it was mostly for self-satisfaction, and other times for sale. Scott used art during the program for purposes of planning, story boarding, and character development to document his ideas for films and other artistic projects. Alex used art during the program to fill up time. When he was bored, he used his computer in tablet mode to draw pictures, write words, and doodle whatever he was thinking.

The students who excelled most in digital media were Chris and Tom. These two students had an easier time keeping on task with the digital media. Chris was usually very patient, but sitting down to make a painting he often looked for other stimulus to keep him occupied. He would sometimes distract others, look for attention from instructors and volunteers, or get up and look for a snack to distract himself. Chris was the most artistically engaged when taking pictures. Because the act of taking photos is such a quick procedure with instant gratification, Chris was able to stay on task one picture at a time. He had not grown bored with the novelty of taking pictures by the end of the program, so I think Chris might gravitate toward photography in his future art making. Tom shined the most in class behind the video camera. Oftentimes when we brought out paints, paper and other media for two-dimensional art making, he was not interested. Tom would decide to take a walk down the hallway and visit with VSA employees instead of participating in painting and drawing activities. When cameras

initially came out, he was the first one to turn on the video setting, even before we showed the students how to take clips of Nicole and I using puppets playacting in front of a cardboard stage backdrop. Tom's final film project was also the longest of all those made by the students. He directed elaborate fight scenes starring himself and others. He asked me to film a portion of it, so as he could be the star and make sure the acting was carried out in an accurate manner.

Some of the other students had success in both camps, using digital and traditional art mediums. Individuals like Jacob, for example, had successful moments in all areas of creation, but it was not obvious that there was a glaring superiority in creating in one medium over another. There were other students who had less overall interest in artistic success, such as Nicole, Colten, and Ben. These students tended to have only a few shining moments during the camps that stood apart from the rest of the daily activities. Nicole was often distracted, or did not care to participate because she did not want to, did not feel like she could do so, or for other reasons and excuses. I do not feel as though Ben had much interest in visual arts, compared to his interest in music. It is my knowledge that he joined camp because of the technological aspect, since he is interested in computers. However, since most of the course was about art making and the process of taking photos and videos, he was less interested in this. Colten took somewhat the role of a mentor to the other students and felt most comfortable helping his peers, whether it was teaching them how to get on the bus or wash out the paint trays. He was most interested in being around people, and helping out others who needed any assistance. Colten is less of an art guy--and more interested in going to camp, in general. He is a social person and likes to keep contact with the VSA Texas staff even when camp is not

in session. I feel that even these students had some positive gains over the course of the summer, even if they were less artistically inclined than the other students.

Overall, what I learned about students with autism and other disabilities and art making is that one cannot generalize a population. Many of the articles I read claimed that most individuals with ASD are visual thinkers (McDevitt, 2004), but it was difficult for me to identify who was thinking visually and when this occurred. Some of the students were more interested than others in art making, but to know if the others were thinking visually was impossible. During the program, I expected most everyone to be interested in the art making activities we were teaching. From day to day, interest in class activities differed, but most of the time students were engaged in the activities either on their own or with a little encouragement from the staff at the NMA camp. I do feel as though all students had a positive experience with art at the camp. All students made accomplishments, and these positive outcomes were evident in their faces at the gallery showing at the end of the summer. The students were proud to show their friends and family what they had done, especially since it was hanging on a wall in an Austin art gallery.

The art experience was positive for all individuals involved. There were many other benefits of the program, but one of the most measurable was the art learning that occurred. I saw individuals like Jacob go from having to be pushed to draw, with a volunteer sitting next to him with constant attention, to independently drawing people, shapes, and painting a mural to be used in our music video shoot. Individual growth was different for every person, but I believe I saw evidence of artistic progress and skill development in every student involved in this VSA Texas summer program.

## **RECOMMENDATIONS FOR INCLUSION AND USE OF PARAEDUCATORS**

Since the NMA course at VSA Texas was not an inclusion classroom, the connections to a public school classroom are not clear and direct. However, I do believe there were some scenarios that I learned from during camp, especially when considering how volunteers, nurses, and personal student aides interacted as paraeducators with the participants in the program.

Inclusion is a widely used and supported method of educating students with disabilities in a Least Restrictive Environment in schools. I believe that all students can benefit from having a diverse group of learners in one classroom. Since all the students in the NMA program were diagnosed as having ASD, technically this was not an inclusion classroom. There were, in fact, many learning differences among the participants, and this in a way provided an environment with diverse styles of learning and ranging educational needs and levels of needed assistance. There were also different kinds of student aides available to support and assist students in their creative process.

Personally, I believe that I could have been considered a paraeducator in the sense that my participation was to assist students with any specialized needs, as well as to assist Carol in everyday class activities. What I read about paraeducators led me to have mixed feelings about how they function in the classroom (Burdick & Causton-Theorharis, 2008, Guay, 2003). This ambiguity is because there are different styles of aiding students with disabilities, and some I find a bit negative. I understand from this research experience how it may be tempting for student aides to help the student more than needed, and to dumb down projects so they are more easily achievable, but I have a hard time seeing this as an allowable approach in my own future classroom environment.

I did see in my observation at VSA Texas some activity mimicking the negative scenarios I read about in my preparation to conduct this investigation. For instance, Alex's nurse had a tendency to ask questions in a way that would give him fewer opportunities to think on his own. She asked questions very simple in nature, when I believe he was capable of answering questions at a more advanced level than was offered. I think this might have occurred from a lack of patience. Alex takes a substantially longer time than most participants when thinking through things, and there is even a delay between when you can tell he has an answer and when he is able to verbalize it. Alex's face lights up when he has a response ready and is very experienced in using his facial features, especially his eyebrows, to relay the message that he is involved in the conversation. I think some of the delay in his verbalization is intellectual, and some delay may be due to the tracheal tube he has to help him breathe on his own. The way his nurse and full-time aide asked him questions were often formulated toward receiving yes/no type answers. I believe she most likely asks questions in this manner out of concern for efficiency, but in the learning environment I think students should have all the time they need to answer more authentic questions with answers they are able to think through.

Another thing I questioned during the NMA program with Alex and his nurse was the occasional instance of his nurse making drawings for him, drawing on his paper, or initiating ideas for him when he was capable of doing his own work. This wasn't something that happened every day, but on occasion Alex's work would be augmented with marks made by the nurse, or she might make suggestions of ideas for his choice of artwork. These instances happened less when one of the volunteers or Carol was seated next to Alex, assisting him, but it is difficult to have two staff members to one student in



any classroom. Alex's nurse also had a tendency to talk to Alex in a childish manner. Alex is an adult, and due to his small stature and disability, people may assume he is younger than his actual age. I find that it is important to treat individuals with disabilities like the adults that they are, so they can learn how to authentically interact with their community and environment.

To contrast this aide, there was a different and more positive situation with a student assigned with personal aides during camp. Ben had someone come with him to camp every day. There were two different men that came with Ben, each assigned to work with him on different days. One aide had some experience working with Ben in school, and the other aide had less experience working with him. Both aides were available to help in only the ways that Ben needed help. Most of Ben's disability comes from physical impairments. He needs some physical assistance in maneuvering around the classroom and is most easily assisted by giving him an arm to lean on as he walks. The aides were often there just when Ben needed help, but in the instance when they were not there in time, any of the volunteers or instructors were able to give Ben the attention he needed. Another way these aides came in handy was that they had an easier time deciphering Ben's speech, which can be described as having an exaggerated slur. His physical limitations also manifest themselves when Ben attempts to vocalize his thoughts. He had a computer to communicate with us, but I never saw him use it. I think sometimes these assistive technologies go unused when the student feels singled out by having them. When Ben did decide to vocalize his thoughts, his aides had a longer history of knowing and interacting with him, so they had an easier time recognizing exactly what he was expressing. It is aides like this that can play a valuable role in an inclusion classroom.

The most successful inclusion with a paraeducator depends on the particular paraeducator and how the instructor chooses to use him or her. I believe that even though we did not have ideal paraeducators, in less than ideal forms (nurses, etc.), we were able to have meaningful interactions with students. When in an inclusion classroom, if a teacher is assigned a paraeducator like Alex's nurse that has a tendency to hinder valuable learning experiences, I think the most appropriate measures taken would be to first have a conversation with the paraeducator to address the problem. Since these individuals are there to help, I would think they would be open to receive feedback, and desire to learn the best way possible to interact with their assigned student. Then, if the problem continues to occur, it is in the best interest of the student that stronger and more strategic measures are taken. One route to accomplish this could be to approach the student's IEP team, or even higher administration, to arrange the student to receive the best assistance for his or her own individual needs.

#### **TECHNOLOGY, ART LEARNING AND AUTISM**

The technology used in the NMA course was mostly demonstrated during the art making process. We utilized Canon digital cameras and occasionally Rick's professional camera for taking photographs. In the film session of camp we used primarily the Flip camera for documenting video. As indicated previously, we did use the film setting on the digital cameras to get the hang of taking film clips prior to the introduction of the Flip camera. We also made use of desktop computers to edit our photos and videos. We used Photoshop to edit the photos and the Flip camera clips were edited using the accompanying software. Most instructional methods chosen by Carol did not include a lot of technological additions. In some instances Carol used a projector connected to a

laptop to display the photos taken in class in a slideshow on a big screen, but other than this we employed more traditional methods of instruction while taking into account any UDL ideas that we could generate.

In a way, technological forms of instruction for students with ASD can be used to create a productive social barrier between the student and the educational content. As stated previously, sometimes students with ASD have difficulty receiving instruction directly from a teacher due to their tendency to encounter social difficulty. When technological methods of instruction are utilized there is no direct communication between student and teacher, and the student receives all needed instruction through pre-programmed learning software. During the NMA program we did not experience as much difficulty as I expected in reaching students with interpersonal instructional methods.

There were some students, like Mark and Jacob, which I believe would have benefited from more technological instruction. During verbal instruction Mark often had a hard time paying attention and making eye contact with the speaker. He kept himself busy drawing and singing quietly rather than listening to instruction. This was not a disruption in class too often, but many times we had to give him instructions on a more individual level after the initial lesson, in order for him to absorb what we were trying to get across. Jacob was another student that had a harder time following along with class instruction given to the group. His posture was slumped over most of the time. He tended to keep his gaze at his feet, and we had a great deal of difficulty getting him to look where the action was happening. I am not sure if technological support in instruction would have helped Jacob with this problem. Even though Jacob frequently had difficulty connecting to the goings on in the classroom, this was not a problem for

him at all when music and dancing were involved. It was a memorable moment of success, towards the end of the second session of camp, when we discovered if there was a performer present, with loud music and dancing, Jacob was more inclined to turn around without prompting and watch what was happening. For students like Jacob, perhaps a more theatrical instructional approach could be taken to keep his interest, rather than adding supplemental technological instruction.

The interaction with the technology that we used for artmaking (digital cameras and Flip cameras) was incredible to witness. I think this might be true of younger aged learners, but it was amazing to see some students pick up a still camera or video camera, and instinctively know what to do with it, how to hold it, and which button takes a picture. Some students had limited prior experience taking photographs with their phones or iPods, and others brought their own personal digital cameras to use in taking photos. The class was very mixed in experience. Some, it seemed, had not held a camera before, or maybe it had been a while and they had forgotten where their hands should go. Many students had difficulty remembering to keep their hands and fingers out of the frame of the image. One way to assist students in holding a camera, was first modeling for them the best way to hold it, and then having the students place their hands over your hands as you guide them to the best hand positions. This method is superior to holding your hands on top of the student's hands, because sometimes individuals get uncomfortable when you try to manipulate their movements. The student has more control when given the opportunity to follow you, and let go whenever they desire to do so.

When it came to using the Flip camera, it was my impression that students had an easier time navigating the device. The cameras do have less buttons to push, and are

slightly thicker and larger, making it easier for students with dexterity issues to hold on to the camera. I am unsure if the Flip cameras were easier to use due to the design of the actual device, or if the students had gained some experience using the digital cameras and applied this to their learning about how to shoot film clips. I also think the interest in shooting film was greater than taking still images with the digital cameras, and excitement may have influenced the level of interaction and interest with using the Flip cameras.

Technological additions to the program were not as ample as they may have been with a larger budget. However, considering that we had six digital cameras, four Flip cameras, computers for editing, and accompanying programs to present and edit materials in, I think the students were able to be exposed to an unexplored medium and process of art making. If I were to redesign the program with a larger budget, I may have added more technological methods of instruction. Some devices worth considering would be more personalized instructional methods, where each student could use a computer to gain information about the course lessons and instruction for projects. In my literature review, it is shown that these methods are an up-and-coming way to educate students with ASD. These methods have not been applied in artistic settings, but may be effective, especially when teaching new media in arts.

Through this NMA program I was not able to witness many instructional uses of technology. From what I saw of the students using technologically current materials, I feel as though there is more research to be done in this arena of education.

## **UNIVERSAL DESIGN FOR LEARNING**

As a reminder, Universal Design for Learning (UDL) is a method of curriculum design originating from Universal Design. UDL is a way of pro-actively designing curriculum so as to meet the requirements of different learners within one classroom environment. At VSA Texas' NMA program, participants with differing learning styles came together in one class to learn more about the use of new media in art making. Even though all individuals present were previously identified as having Autism Spectrum Disorder (ASD), the participants' learning styles and differing abilities were represented in a number of different ways. UDL has been a recommended method of educating students with different ability levels in inclusion classrooms. If the educator is prepared ahead of time with a universally designed curriculum, less individual adaptations to instructions are needed during instructional time. Some basic examples of considerations for a UDL curriculum would be the space and environment of the classroom, and the methods of instruction whether through a PowerPoint presentation, verbally, or otherwise.

VSA Texas chooses UDL curriculums due to the variety of learning styles represented in their art programs. Accessibility is one of the main goals in the programming of activities and classes. Considerations are made ahead of time for individuals with hearing impairments, visual difficulties, physical limitations, and differing learning paces. Another thing that Carol demonstrated in the NMA program is the attention to environmental familiarity. This is especially important for individuals with ASD because they can become uncomfortable in new situations and environments. The first day of both summer sessions, all the participants and volunteers took a tour of the building. We noted the location of restrooms, administrative offices, and the exits.

During this tour, Carol gave Chris the opportunity to lead the tour with some cueing, so that he did not leave out any important aspects of the building. He was chosen to lead the tour because he had some experience with the building, since he had taken a few VSA Texas courses previously. Chris had a sense of pride that he was able to be the one teaching others about the building. Also, in terms of environmental familiarity, the classroom site was explained to participants, and I made classroom signs (See Appendix A) to situate around the room so students knew where to put their lunches, where to store their cameras, and where they could go for some quiet reading time. These signs had also been considered in UDL terms.

Similar to the act of giving Chris responsibilities in the tour of the building, Carol also gave others in class the opportunity to participate in activities that would aid in class instruction. In the initial planning for taking video clips, the students learned traditional verbal signals. Everyone was invited to make signs that read “Action!” and “Quiet on the Set,” so that they could display the word at the appropriate time in the filming process. For students who are unable to write out words on their own, there were some other UDL strategies employed so they could participate. Jacob, in particular, has a difficult time writing words since his vocabulary is limited; he also needs help with spelling. For a student like Jacob, Carol would create a worksheet with the word she needed outlined in dots so Jacob would be able to trace the word, and then make the letters wide enough to be legible. Other students like Chris, using his leadership skills giving the tour, had their opportunity to shine in class on an individual level due to their experience in one thing or another. Scott, in particular, created his own website and has much experience with the Internet and computers in general. Scott was chosen to help carry out a lesson on Internet safety. He taught his peers valuable knowledge about image copyright laws, general

Internet safety information about passwords, and what is and is not safe to post on social media sites or message boards. During this lesson Carol also used accompanying text and images similar to the classroom signs to make further UDL considerations. Many students were given this individual opportunity to shine in the spotlight, and I think this is especially helpful in confidence building as well as strengthening the bond between classmates in the setting.

Another important action that Carol took when the program began was to explain her expectations of student performance as well as her goal of running the course as though it was a community college course. Since going to community college is a goal held by many of the participants, Carol wants to give them an authentic college-like class experience. This act of preparing students ahead of time also translated to other parts of camp. Before we would engage in a new activity, or venture outside the classroom, Carol made a point of describing the activities to come, in detail. This is also an important part of environmental familiarity. Before going to the café down the street for the first time, the participants all had an idea of what to expect. Carol described how we would navigate our way to the destination, what activities would take place upon arrival, and what the setting is like, physically. Additions such as these end up being most important to individuals with ASD, since typically these individuals are sensitive to environmental changes. The communal pre-planning is also essential in the UDL curriculum.

One of the three main principles of UDL is to provide the students with multiple means of representation in instruction. In a way, the classroom signs were a way of presenting the students with concrete answers to questions such as where they should put their camera when not in use. In addition to Carol's instruction, students had the option to find locations for themselves using the signs indicating where items belonged. Within



the signage, the representation of information was considered. The lettering was in bold, large font for students that may have difficulty reading smaller print, and an image was also on the sign. A clear picture of a camera showed students the location of the camera check-out area, and various images accompanied the other signs so students who could not read were able to recognize the visual cues. This same idea was also used when presenting PowerPoint slides. Most often the wording on the slide would be very large and minimal, and the accompanying image would associate with the concept of the slide. One last example of multiple means of representation in the UDL curriculum design of the NMA program was situated in the instructional materials for a journal/ book-making assignment. Each student was to create a book with a set supply list including ribbon, staples, glue, and various kinds of paper. In addition to Carol's verbal instruction and modeling, the students were each handed a worksheet describing each of the steps involved in making the book. The steps were separated into manageable tasks, like folding three sheets of paper in half. On this handout there was text to represent the task at hand, as well as pictures representing each step of the book-making process.

I learned so much from Carol and her use of UDL during instruction. Adding in multiple means of representation and various examples was easy for her, and she effortlessly incorporated these aspects of instruction since she has had so much experience using UDL curriculum. Even during casual instruction she would often use hand gestures and sign language in conjunction with her vocal expression. Her signing would sometimes not be American Sign Language, but just gestural additions to what she was saying. This made it easier to understand things spatially, and it is also more easy to understand her emotions when she exaggerates her facial expression and posture. Carol would often express herself in a sing-song manner. She would sing what she was feeling,

or sing a greeting to participants upon first daily interaction. Interestingly, this sing-song way of expression had an effect of welcoming, and often lifted all our spirits. In addition to this daily expression of gestural and sing-song conversation, Carol made a conscious effort to add details into instruction that aligned with the principles of UDL curriculum, whenever possible. A good example of this was when the group took a field trip to Arthouse, a local gallery in Austin. We went to the gallery specifically to see a film about individuals who are blind, and their initial reactions to “seeing” an elephant for the first time. The blind individuals narrated most of the film, but during the end there was text with no accompanying audio in the film. Reactively, Carol began reading the text on screen so that students who had a compromised sense of sight, or an inability to read, would be able to experience the film in the same way the rest of the participants could.

The second of three main principles of UDL is to provide multiple means of action and expression. During the NMA camp I was surprised to see how many different options for creative expression the participants were able to choose. I expected, since it is a new media camp, to see mostly photography and digital video. I was excited when Carol told me that there is also a substantial emphasis on traditional art making methods. This emphasis gave the students an opportunity to use their compositional eye two-dimensionally, as many of them were accustomed to. This form of art-making was especially connected to our digital work. Since we were working on portraits for the gallery show, and portraits in photography, the students were able to compare the two mediums directly. I find it very important, when in the creative process, to switch gears from one medium to another when working in one creative groove for too long. During camp, after a morning of taking photographs, in the afternoon after lunch we might paint portraits for the gallery show or work on the backdrop for the music video at the end of

the film camp. Another much needed shift that we took often, was toward creativity through movement alone. This was a great way for us as a group to loosen up before returning to the task at hand. We would put music on and dance around, do the limbo, and teach each other dance moves. This was a great method to transition from what we were working on and recharge the energy of the class. Another similar method of recharging student interest that we employed was conducting theatre games or warm ups. These were especially useful on the mornings that everyone wasn't quite ready to work.

The last of the three main principles of UDL is to provide multiple means of engagement. I believe that in the NMA program this principle is deeply tied to the principle of providing multiple means of action and expression. Through the different methods of creating art, as well as our dancing and theatre games, there were absolutely multiple means for engagement in class every day. Another thing that should be noted is that during any activity when the entire class was expected to be involved, if at any time a student was uncomfortable with the activity they could sit, or go for a walk if they were too stimulated or upset for whatever reason. On the day of filming for the music video, some students were definitely more sensitive than others to the volume of the band, as well as the amount of stimulation because the room was so full of equipment and people. At different times students would come and go from the film shoot if they needed to sit down in the back of the room to take a break, or go for a walk down the hall to get away from the loud noise. As noted previously, Tom was one student who was particularly sensitive to highly expressive sounds. We didn't see Tom for much of this day since he was more comfortable on the outside of the classroom, even if he was only sitting on the other side of the door to get some time alone. Carol was very flexible and considerate of

the students' individual needs, and encouraged independent decision making when participating in projects and classroom activities.

Another individual example of this flexibility was when we as a class took a field trip to the mall for a visit at the Apple Store. Nicole, in particular, had a difficult time staying with the group, which worried me, since I had never been on a field trip like this. I was expecting to stay together and make our way to our destination as a whole, but Nicole had other plans. She decided there were a few places she had to check out before making her way to the Apple Store. I asked Carol if I should accompany Nicole on her venture, but Carol told me that Nicole was free to go wherever she needed to go, and trusted her to be back to the store on time. I don't think this flexibility will work for every student, but since Carol had known Nicole for some time, and recognized her independence skills, she was able to give Nicole the freedom she craved. Another thing to note with Nicole in this scenario is that she has a cell phone on her person at all times, and is very considerate about answering calls and responding to texts, so if there was a moment that we could not find her we could certainly reach her by phone.

One of the most difficult things to prepare for in our particular classroom in terms of UDL curriculum was physical access for all students to the different areas in class. We had two students in wheelchairs during both camp sessions and sometimes they were unable to reach a particular part of the room because furniture was in the way. The abundance of furniture was a problem in multiple instances. This was a variable we could not control in the classroom because VSA Texas rents the classroom space and the equipment and furniture inside. We did eventually find a way to create traffic patterns for the individuals in wheelchairs, but it took some time before we realized this was possible. We discovered that using electrical tape on the floor to mark off zones where

chairs and other furniture could not be placed was a good way to create pathways wide enough for wheelchairs to gain access to computers, books, etc. This strategy also proved useful when Rick brought his professional photography equipment to shoot the students' portraits to incorporate into the final showcase. We taped off an area that was a "no-go-zone" for individuals who Rick had not invited to enter the space. The equipment was very expensive and fragile. We were also negotiating with limited space to conduct a photo shoot, and the tape was a useful way to designate the space only for individuals who were having their picture taken.

## **EVALUATION AND RUBRICS**

In my study, evaluation was not one of the more primary elements that I learned from. However, to fulfill the grant that VSA Texas received to create and implement the program, evaluation was a required element. The evaluation methods used were primarily self-evaluation rubrics completed by the students. The actual evaluation documents and formatting took some trial and error before we initiated a method that worked best for the students.

At first, the wording of the evaluations were far too advanced and even the volunteers needed to re-read questions and think about what was being asked before knowing what an appropriate answer might be. Changes were made in the evaluation form so the materials and concepts were more easily understood, and many of the students needed no additional help completing the assessment. The content of the evaluations covered topics such as the following: improvements made in taking photographs, editing photographs, community traveling skills, and self confidence, among others. The form, or rubric, had a limited amount of questions, somewhat of a

sliding scale of answers, and was color coded in a simple font. This made the form easier for individuals to navigate, and also considered UDL guidelines. If navigation of the rubric was still difficult after these accommodations had been considered, I learned that a good way to get students to focus on one question at a time is to use one or two different sheets of blank paper to cover up any text on the page that the students do not need to focus on in the moment of answering a particular question. This way the student is less likely to become distracted or overwhelmed by the other material presented on the evaluation.

The evaluations were conducted at the local café the class visited. The process of evaluation was the same every time. This involved traveling by foot or wheelchair to the café, setting up seats where we would conduct the evaluation, and then students had the option to purchase food or beverages while we talked at the café. Alicia and I were the only two individuals that administered the evaluations, so when we would be with one student the other participants had some time to socialize and interact within the environment of the café.

When sitting down with an individual student, the level of assistance provided was dependent on the needs of the student. In a way, this is straying away from the ideas of UDL since the implementation of the evaluation differed from student to student. Some individuals didn't utilize assistance when completing their self-evaluation. For example, Scott did not need any help with reading, and was able to hold a pencil and mark answers on his own. I knew that he understood the evaluation since during the process he read each question aloud, talked through his reasoning quietly to himself, and then marked the appropriate answer. Nicole also was able to complete the evaluation by herself, and I sat quietly with her while she quickly marked her answers and turned in the document.

Other individuals needed more attention. On the lower end of attention needed was Mark. He seemed a little bothered that I was interrupting his focus on drawing and tried to speed his way through the evaluation to get it over with. He had some difficulty listening to me during the process since he was singing to himself. I feel as though he did his best to answer authentically, however, I do not feel as though he was able to concentrate to think through his answers. Ben was also tempted to rush through the evaluation process. When reading the questions to Ben he would try to answer the question before hearing the explanation of what was being asked. At this point in the evaluation process I tried something different. I took Ben's pencil to hold until after I had discussed the form with him. This was very helpful because I was able to tell by his reactions that he was listening to what I was explaining, and then he took more care when marking his answers. I also made adaptations to the procedure when administering the evaluation with Alex. Since Alex is in his wheelchair without enough mobility to be able to lean over a table and circle his answers, I was able to prop up the evaluation so we could look on and read through the question and answer options together. Alex then gingerly held a pencil and pointed to the answer he thought was most appropriate. I circled and confirmed each answer before moving to the next question.

Even though I saw only one type of evaluation and rubric (Self-Evaluation), I gained insights into how to assist students through this process. I believe that self-evaluation worked well for this group of individuals, and I am confident that each participant was accurate in their own assessment. Carol did conduct a smaller form of evaluation given to the parents of participants, but there were not enough forms returned to gain any insight regarding how well the student's evaluations and parent's evaluations matched. I also felt that it was slightly inauthentic to have parents gauge the level of

improvement in digital photography and film skills since the parents were not present during the camp. I wish there were other forms of evaluation and assessment for me to observe, but I did learn some valuable things to take away from the study about self-evaluation by students with disabilities.

The most important thing I gained from the evaluation process was that what works for one student will not necessarily work for another. Again, flexibility is key when working with students with individualized adaptive needs. When designing the evaluation documents as well as when administering the assessments, there was a learning period that came before the most effective practice of administration occurred. I believe that the struggle to find best practices here were present due to the fact that this was the first time the program was conducted, and we had some unexpected reactions to evaluations and some difficulties designing the most accessible and appropriate evaluation. Yet, we were able to find ways to conduct these evaluations.

The next section provides evidence of some successful strategies that I witnessed during my time conducting research with VSA Texas.

## **DOCUMENTED SUCCESSFUL CLASSROOM STRATEGIES**

### **Assistive Technology**

During the NMA camp I became more familiar with assistive technologies and learned how to discern between successful strategic adaptations and useless equipment. As stated previously, assistive technologies are used on an individual basis, and are not a part of UDL curriculum design. Due to the individualized purpose of assistive



technologies, the educator should employ their creative skills in order to solve problems using assistive technologies in the classroom.

One assistive technology we used in the NMA program was the adaptation of the process of taking photographs for Alex. This adaptation to his equipment was employed so he could participate as independently as possible. Since Alex does not have much strength or use of his hands and arms, he was unable to hold a camera to take pictures. Our solution to this problem was to affix a bar to his wheelchair to attach his iPhone. The way his iPhone was connected to his chair suspended the device so the screen was comfortably in view. He was then able to gently touch the screen to take a picture. Alex still needed some assistance during the process since he cannot maneuver his wheelchair independently, but we were able to modify the activity so that he could participate in taking his own photographs without much additional help.

An example of assistive technology that was not effective was the computer that Ben took with him to class every day. His aide would set up the computer in front of Ben so that he could use it as a communication device. I never saw Ben use the computer, with the exception of one occasion when I saw him surfing the Internet. I think what might be best for Ben is to try out some different devices used to aid in communication. Jacob also has verbal expression difficulties, and uses an application on his iPod to communicate with others. I think a reason the technology sometimes goes unused is that the individual does not want to be perceived as different from her or his peers, and since almost everyone has an iPod to listen to music, being seen with such a device might not be as awkward or potentially isolating.

Some of the more commonly used assistive technologies in the NMA program were very inexpensive adaptations to art materials, or strategies to focus attention on a

particular task. During our periods of creating art using more traditional art making methods like drawing or painting, some students experienced difficulty when their papers were getting away from them on the table. This usually happened to students with mobility complications. A successful way to fix this was to simply tape the paper to the table. This way, students do not have to be as careful about the application of paint or other mediums, since there is no worry that the paper's location will waver. The other previously mentioned strategy that I found myself using often during the administration of evaluations was the utilization of blank paper to cover up parts of text that is in view, when it is not the focus of the task at hand. When trying to assist the participant's gaze on a particular question of the evaluation, I would cover the other portions of the document with one or two blank sheets of paper. This is especially helpful for students who get distracted easily or overwhelmed by too much information. I enjoyed learning inexpensive ways to make classroom activities run smoother, and create a less stressful environment.

## **Choices**

Compliant with UDL curriculum design, Carol made sure that students always had the opportunity to make independent choices during the learning process. Whether the choice is what to draw, what activities to participate in or sit out of, or where to sit during lunch, students had choices in almost every aspect of camp. When choices are provided, it ensures that the class activities will occur with less bumps along the way. This is especially important for individuals with ASD because, generally, these individuals are more sensitive and sometimes can be finicky or easily upset about things that are out of their control.

Carol was very encouraging to students when it was time for them to initiate choices. The act of making a choice may seem insignificant, but every time a decision is expressed, the student is exercising their independence and potentially building their level of confidence in their choices and actions. As long as the selection of activities is relevant to the specific learning outcomes, I think the more choices students have the better. In this way students customize their own learning experience and are able to decide what they would like to do, depending on their personal strengths and interests.

### **Program Staffing**

One theme I found throughout the duration of the NMA program is how well staffed the program was on a regular basis. VSA Texas is fortunate to have individuals who are interested in volunteering, thus increasing the number of individuals working with students. This way, the students get as much individual attention as possible. When each student has more personal attention the staff would have less work to do overall, and less anxiety in their work, while students have the availability of an individual staff member almost at all times.

One situation where I experienced some anxiety due to low amounts of staffing was on our trip to The Apple Store. Even though we took along our normal amount of volunteers, and also a few parents, I was still very nervous about losing people in public transit, keeping track of Nicole, and making sure everyone reached the bus stop on time. These are the reasons why on traditional school field trips the group usually has a few additional chaperones.

There was also a day during camp when stress was created due to too many staff workers being present. During our music video shoot, all of the staff and volunteers who

usually come to camp were there, as well as all the students and the band. Also a few members of staff that the band brought with them were there to assist in taking video with their own equipment. This day was one of the most stressful days during the entire program. We, as a class, had come up with ideas about how we would set up the video shoot, which clips to take, a sequence of filming, and had prepared for other details in the process. When the band arrived it seemed as though there was some miscommunication about what we expected and what their plans were. It appeared as though there were too many ideas being exchanged, when we had already decided on what we wanted prior to the set up of the shoot. We ended by having to compromise with the band. They planned most of the shoot, telling us where to go, and even instructing us on which shots to take with our Flip Cameras. It was a very tense scenario. We all felt as though we had our toes stepped on, and if there were less people involved in the planning process the whole shoot might have gone better, with more positive energy.

As it turns out, the balance of the amount of staff is dependent on the activity taking place. It may even depend on the day, since the population we were working with can sometimes be unpredictable. I do think that, overall, the more staff the better, so each student can have as much attention as they need or want. But significant planning must take place with ample communication when undertaking a class activity as involved as a music video shoot.

### **Applicable Learning**

During my time in graduate school at The University of Texas at Austin, I have learned about the benefits of making learning applicable to students in their every day lives. I think learning applicable knowledge for individuals with disabilities and

practicing common daily activities is important for increasing student independence. Carol did her best to incorporate a number of activities into the curriculum to get students out into the community, so they can learn how to interact appropriately within the Austin community.

One of the important activities students learned about at camp was riding the city bus. We took the bus on both of our field trips. The students were expected to bring their own money or bus pass, they had to complete the transaction when boarding the bus, and had to know when the appropriate time was to get off the bus. Another valuable tool we used was the city Capital Metro trip planner on the Capital Metro website. It is this type of activity that I feel is very useful for the students to practice or learn more about. Many students in the program will not have the privilege of driving in their lifetimes, but independently riding the public bus is a good option, especially if the students become comfortable and familiar with the process.

We even took opportunities when we were goofing around and dancing to incorporate the learning of life skills. We would practice dancing with one another, establishing appropriate levels of personal space, and timing of pair dancing with the music. We even tested Chris's skills of asking a girl to dance. Overall, I think that working in opportunities to give students authentic life learning experiences is important, and I was glad to see this modeled at VSA Texas during the NMA program.

This chapter described the data collected during the NMA camp at VSA Texas. I discussed important elements of the camp, and what I learned from the happenings during the program. It is hoped this information will be relevant to new teachers, those teachers trying to learn more about educating students with ASD or other disabilities, and teachers

interested in learning about and incorporating a UDL curriculum. In the final chapter I will reflect on my research conducted here and recommend future research endeavors that emerge from this study.

## **Chapter 6: Conclusions, Reflections, and Recommendations for Future Research**

This study was designed in attempt to better understand how individuals with disabilities, and in particular Autism Spectrum Disorder (ASD), can be educated through art. For this study, I was a participant observer in a summer camp teaching individuals with ASD how to use new media in their artwork. VSA Texas' New Media Arts (NMA) camp was an appropriate setting for me to view Universal Design for Learning (UDL) curriculum in action, as well as the other elements of my study such as technological art learning, evaluation, and a more general look at educating students with ASD through art to connect ideas of UDL curriculums from this program to inclusion classrooms.

### **RECAP OF THE STUDY**

There were two camp sessions, each with a different content emphasis held during the time of my research. The NMA camps focused on building digital photography skills and digital film skills with students possessing ASD. Each camp session lasted two weeks, and was held Monday through Thursday from 10:00 am until 2:00 pm. In this setting, I acted as both a participant mentor and instructor with students in the camp and a research observer. The students, volunteers, teachers and student aides were all aware I was coming to camp for my research purposes. Most of my research focused on UDL curriculum, and I searched for evidence of best practices in the education of the population to highlight in my study. I was interested to know how a UDL curriculum can work effectively, and looked for specific aspects of the instruction that I found applicable to all types of learners, to potentially use in an inclusion classroom setting.

My intended areas for study included the use of a case study to discover what insights may be drawn from a working UDL curriculum that effectively serves students with ASD in an art learning setting. My goal in conducting this study was to make recommendations that will assist other art educators in successfully implementing UDL curriculum, or elements of this curriculum. I also intended to learn more about accurately assessing students learning through the program. During the study I learned more about what assessment is like for this population, and was able to draw some insights regarding what might work for some students in the more general evaluation process.

#### **MY STUDY PERTAINING TO MY PROBLEM STATEMENT**

During my time at VSA Texas as a participant observer at the NMA camp, I gained an experience that I believe many future teachers would envy, or that many practicing teachers would find useful to inform their own experience of educating individuals with disabilities in art. In the introduction to this study, I provided a problem statement explaining what I believe to be a current problem in art education. Here, I discussed how many art teachers do not believe they are prepared to teach individuals with disabilities that are included in their general art classrooms. Most have limited experience with individuals with disabilities, and I recommend spending more time with individuals with disabilities because the more time spent with the population in question, the more comfortable educators will become when working with students, and the easier it will be to discover how to appropriately educate and interact with someone who has ASD or another disability. If this valuable time with the population cannot be arranged, learning more about UDL curriculum design can be helpful to teachers that may not know how to accommodate a student with an individualized adaptive need in their



classroom. Knowing the main concepts behind UDL can help to plant a seed in an educator's mind regarding how to reach more individuals in their classroom. I believe my study has addressed the problems of under-preparedness of art educators in teaching students with disabilities through highlighting UDL curriculum design. I think that along with the suggestion of UDL, the classroom strategies used by Dr. Carol Stensrud, and examples of what how UDL functioned at the NMA summer camp, can give teachers useful ideas about how to implement some key elements in UDL curriculum.

Another topic addressed in my problem statement is the uncertainty of how to appropriately evaluate students with disabilities, and how to assess the achievement of students in the art classroom in general. Assessment is a very difficult task to accurately accomplish in art, because each result to an art project has a great deal of flexibility and each student responds uniquely. A single right answer to an artistic inquiry is not always seen. During the study, I primarily witnessed self-evaluation used in the assessment of students. I learned how to administer this type of evaluation and also secured some strategies to assist students on an individual level. I have little comparative material to conclude that self-evaluation is superior to any other method, since this was what was used primarily at the NMA camp. Self-evaluation can be a valuable way to recognize how students feel about their own work and learning, but I do believe that other methods of evaluation and assessment are needed in order to accurately document student growth and achievement.

## **PERSONAL REFLECTIONS**

Through the experience of conducting the research for this study, I have learned invaluable knowledge. I became much more comfortable interacting with, and assisting

the education of students with disabilities. At first, I was slightly uncomfortable working with students who have disabilities, since I did not know what to expect, recognizing there are so many ways that ASD can be expressed. However, the most important thing for me to do in the process of research was get to know each individual student, who they are, what they are interested in, and what their personality traits are in order to understand how to better educate and interact with them. I think this perspective and need to know students personally applies to all students in general education. It can be daunting to have a large group of students to teach when you do not know how they will react to an instructional lesson. Only when a teacher gets to know the group, and each student on an individual level, can one teach most effectively.

Since the most important part of the study to me was to learn more about UDL and creating an environment of instruction that can reach different types of learners, this was the part of the study where I primarily focused my attention. It was wonderful to see a UDL curriculum in action, to know what it looks like and how I might prepare for different types of learners before they ever enter my classroom. I truly feel that this type of curriculum can be most effective when teaching students in an inclusion classroom. Even if there are no students with disabilities in a classroom, learners will be able to gain the most from a lesson when they have various options of learning. Without conducting this study, I might believe that UDL curriculums could be choppy, or that instruction might be disconnected from learning due to how much information is involved. However, from watching Carol it was wonderful to see how seamlessly one can incorporate multiple means of expression, representation, and engagement in a UDL designed curriculum.

I believe the overall research I conducted was successful. There were elements of the study I wanted to examine more closely that I was unable to engage with, due to the nature of the program and the time constraints involved, among other restrictions. Since UDL was my main concern in the study, I tended to focus my efforts on discovering all I could about how a working UDL curriculum is conducted. The end result of the research looks more deeply into UDL, and contextualizes the ideas behind it. I found the narrative nature of the study effective in demonstrating how participants reacted to curriculum and how day-to-day activities occurred while keeping in mind all the UDL considerations. I especially believe my “Documented Successful Classroom Strategies” section in Chapter Five will be of help to future or current teachers looking to improve their awareness of UDL applications in their own inclusion classrooms. There were so many simple adjustments that were made during camp that I had not thought of, and after Carol demonstrated how much easier art making became for these individuals after these adjustments, I was excited to share this information.

For example, I am sure that many teachers know about taping down a piece of artwork for a student who has difficulty working if the paper is sliding around, but this was a completely new idea to me. This was also an strategy I believe can be applied to both students with disabilities and students who are typically developing who may be fidgety and have a hard time keeping their paper in place as they work.

Also, one of the most important topics mentioned in the classroom strategies sections in Chapter Five is learning about how to appropriately use staff in a program or in a school. Knowing more about how to use staff is something that will come of excellent use to teachers. Having positive and constructive relationships with paraeducators, nurses, etc. can make or break the art learning experience a student has in

the classroom. With a more open relationship between the staff, there is opportunity to give each other feedback so that the student is receiving the best attention possible. I found in the NMA camp that we were able to avoid most problems with staff when we were able to give students more one-on-one attention. This may not be feasible in a more typical classroom setting, but interacting with students individually is an important part of their arts education.

In my initial plans for research, I expected to see more technological aspects to investigate, since UDL is normally associated with technological supports in instruction. Seeing the students interacting with technology in the form of the equipment we used was productive, like digital cameras and Flip video cameras. However, very little of the instructional methods used technological supports other than the PowerPoint presentations. Another expectation I had going into the NMA camp, which differed from what I found, was the variety of types of assessment used in the NMA program. I had planned to see various types of evaluation to make a comparative analysis, and was only able to participate in assessment involving self-evaluations. Even though these two aspects of the research were not what I expected, I was still able to gain an idea of what using technology in the classroom is like, as well as how to assist in assessment of individuals with disabilities. Of course, expectations and actual happenings are likely to be different for most researchers, thus I was not surprised to find that elements of the NMA program were not what I planned. Since the NMA project was very new and still in the process of being developed for recreation, I was particularly ready for unexpected changes.

To reflect, I would recommend to future UDL researchers to learn as much as possible about UDL before beginning a research endeavor. Knowing the strategies

involved in UDL prior to starting work in the field will help to more intimately know about what is witnessed, and how to take record of it accordingly. In my process I was able to do some research about UDL strategies, but the more a researcher knows about the curriculum design and planning that goes into UDL curriculum, the better.

Something else about the research process that I did not anticipate was how exhausting it would be. I arrived at camp early, stood on my feet working with the students and helping Carol during the duration of camp. Moreover, I then stayed late after camp was complete each day, to wait with some students who would stay after the session was technically over because their contract with VSA Texas stipulated that they would be with VSA Texas for a certain amount of time every day. Even after these students had left, some days I would remain even later to talk to Carol and Alicia and the other volunteers, either to discuss the happenings of that day or to prepare for the next day's activities.

I had a wonderful time working with VSA Texas for the NMA program. Through discovering VSA and VSA Texas I have made an excellent connection with Carol Stensrud that I believe will last. I have continued to volunteer with VSA Texas since the program has ended, and I have maintained relationships with some of the participants. I did not imagine loving what I was doing as much as I did. Before the study began I knew that I was interested in learning more about students with disabilities and how they can be educated about art through UDL curriculums, but I had no idea how much fun I would have and how attached I would get to some of the participants. The experience in its entirety was very positive, and I hope to have more opportunities to teach art to students with ASD in the future.

## **RECOMMENDATIONS FOR FUTURE RESEARCH**

For this study, it made the most sense for me to have an environment where there were primarily individuals with disabilities seeking art experiences through a UDL curriculum. Since I will most likely be teaching in a classroom primarily with students who are developing typically, and only sporadically will there be students with adaptive needs included in the classroom, I would recommend conducting further research in an inclusion setting where one could witness UDL curriculum reaching learners who need more curriculum modifications, as well as students who expect much less directive help in their learning process.

I also recommend the utilization of a research site that uses more technological supports for instruction. I am curious to know how a teacher can use various technological supports for a UDL curriculum in their instruction. In these future research endeavors I would also recommend that the researcher attempt detaching themselves from the happenings of the classroom, unlike I was able to. I was a very involved participant in the program, which functioned well for my research methods. If I were to undertake another project observing in a more traditional inclusive classroom, I would be more inclined to act as an observer who was not involved in the curriculum choices, or involved in the daily activities. When the researcher is more detached, she or he might have the opportunity to focus more on what is going on in the classroom, and have a broader view of the classroom. My focus was often pulled in different directions so I could either help particular students, or assist Carol in whatever she needed. I think there would be a distinct advantage in being an observer who is more disconnected, in that there would be more opportunities to record information found at the site, while not being distracted from the research at hand.

Assessment and evaluation in all art education is a difficult topic, and current educators may benefit from having more research recommending methods of evaluation in the classroom setting. The assessment I saw at VSA Texas was more of a test to see if the program was achieving its aims. School evaluations can be similar, but are often more regulated than the evaluation I worked with since the school system is so dependent upon evaluating student performance and achievement.

If I were to recommend a perfect location for future research it would be an inclusion classroom with a mix of many different learners. The curriculum would rely heavily on UDL principles and utilize current technological supports for instruction. There would also be evaluation relevant to school and applicable to inclusion classrooms in the general art setting. Obviously, this would be a difficult location to discover, but I believe that much can be learned through research conducted at the right setting. I learned an incredible amount of information through this study. However, there is always more knowledge to acquire, and more insight to discover from different learning environments.

Another recommendation I would like to make is to begin the process of handing out and collecting consent forms as soon as possible. For Institutional Review Board (IRB) approval I was required to have participants or their parents and guardians sign consent forms to alert them of the fact that a researcher was present. Some of the students were able to complete their own forms, but the students who could not consent to the research independently were required to have their parent or guardian consent for them. Permission slips are difficult to collect from students in general since there is the period of time where the form is transported from camp to home, and home back to camp. Returning the signed forms was especially difficult for students who lived in

group homes. Their “manager,” as they called their legal guardian, was unsure of why he or she had to sign the form, and often forgot to do so. I had to repeatedly call their guardians to get the form returned and signed, as needed. In the end I was able to obtain all the necessary forms from the students and parents, so I could include information from these participants in my study. The process in doing so was slow, and I had to keep in close contact with some of the guardians in order to retrieve what I needed. It is important for the researcher to establish a friendly relationship with parents and guardians to help keep the process moving.

An additional suggestion to consider for future researchers is to be as involved in the planning of the curriculum as possible. I would have enjoyed helping Alicia during the process of creating the curriculum documents she compiled for VSA Texas’ grant responsibilities. Upon viewing the final documents, I saw that they are very informative and accurate to what we did in the program. I would have liked to be more involved in the process of creating these documents if I had not been asked to head the evaluation and assessment portion of the program. The more involvement a researcher has with their study, the more information they can contextualize within their investigation, or the more specific data they can collect in relation to the research question.

A final consideration to make in the research setting is how the researcher will record the data. My thesis advisor suggested that note taking could function in a way to document the events and analysis at the same time. In taking observational notes, one side of the page is for what occurred during camp, and the other side of the page is designated for any accompanying analysis. I thought this was wonderful idea and process of note taking, but I was unable to adopt this technique. It was more natural for me to just jot down anything that came to mind while interacting with everyone at camp



in a more narrative manner. My pages of notes ended up looking like bullet points of things I wanted to recall and revisit at a later time. I was thankful that all my notes were in chronological order in the same notebook for both camp sessions and this was enough for me to remember the important points during camp. Having the accompanying analysis within the moment may be a successful technique that future researchers may consider.

Other than the difficulties I had obtaining consent forms for my IRB approval to use the data, in my view I believe that the program and my research of it ran smoothly. The daily activities were fun, interactive, and interesting to both the participants and myself. We were able to get through the program with everyone in one piece while having fun and learning about new media in art making. The research was very rewarding.

In all, I believe my research efforts were justified and beneficial. I was able to learn about and document important information about UDL curriculums and educating individuals with ASD, among other topics. Since statistically more and more individuals are being diagnosed with ASD and other disabilities (Lord & Bishop, 2010), I believe that researchers and teachers like myself must try to learn as much as we can to increase and improve our abilities to teach these students in appropriate ways. Inclusion is a reality I believe many teachers hope they will not have to deal with or neglect to consider. As a teacher with the preparation I am receiving, I want to be the one to reach and teach students, regardless of their abilities or disabilities.

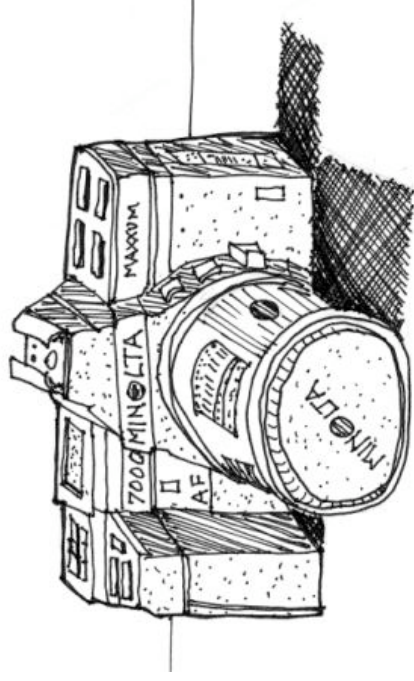
I believe it makes sense to encourage all students to create art, and have an outlet of artistic creation in their lives. Why not make sure that individuals with disabilities

receive the same opportunities for education as the rest of the students in class? I feel a responsibility to attempt to reach all the children in my future classroom, and after the learning experience I have had during this experience at the VSA Texas's New Media Art camp I believe I am ready to implement elements of UDL curriculum design to reach all the students, whether they have adaptive needs or not.

I look forward to learning more about how to give students with special needs the best possible education in art, and I trust that my study will make an impact on current and future educators in their process of planning curriculum for inclusion classrooms. I am confident that the knowledge base and interest of teaching this unique population will expand over time and educators must grow and adapt with this shifting field. I encourage the implementation of UDL curriculums, and urge future researchers and educators to develop more "best practices" to utilize effectively in their own educational and instructional journeys.

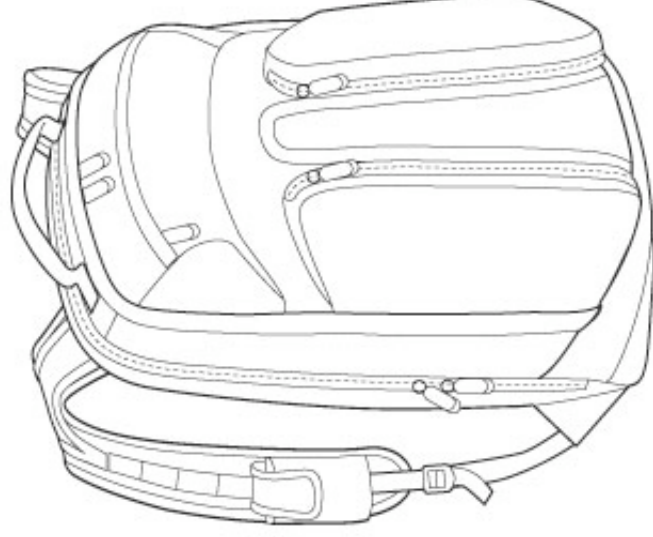
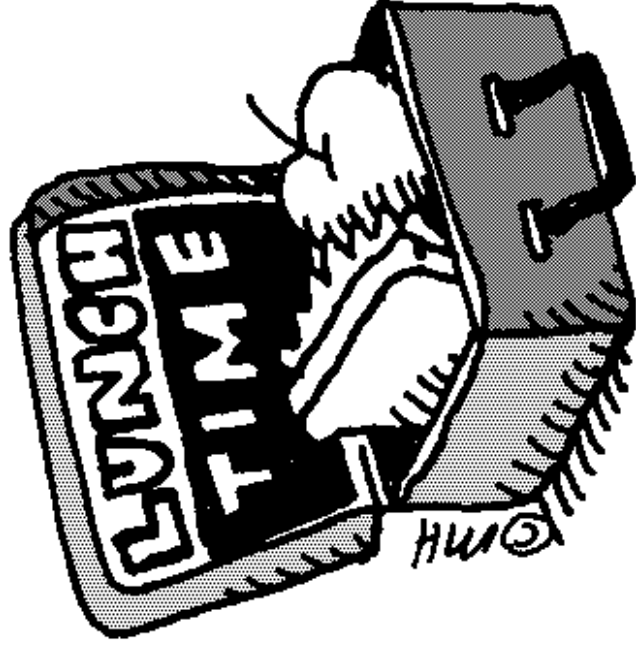
## Appendix A

# Gear Check Out



VSA TX New Media Arts 2011

# class closet



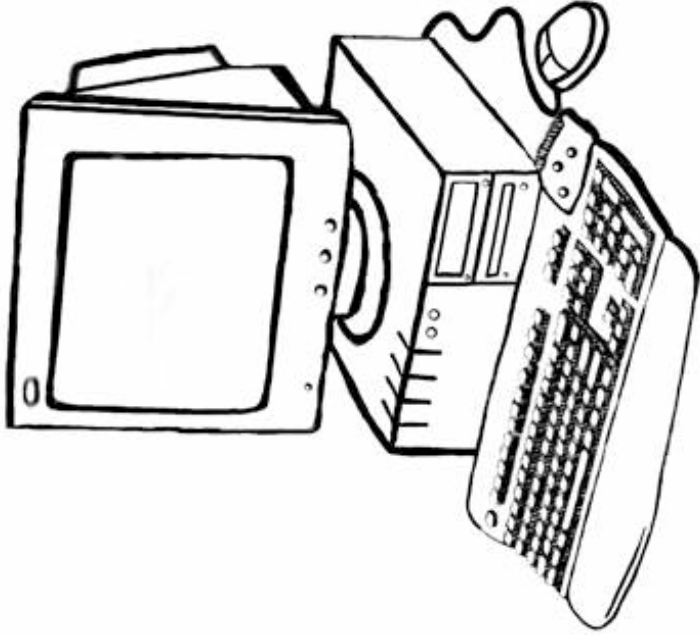
VSA TX New Media Arts 2011

# Quiet Area



VSA TX New Media Arts 2011

# Computer Lab



VSA TX New Media Arts 2011

# Kitchen Stuff



VSA TX New Media Arts 2011

# Art Stuff





## Appendix B

### DAILY CLASSROOM SCHEDULE

#### *Camp #1:*

**Day 1:** Independent book making with print-out step-by-step instruction, teacher direction, and personal modeling. Rick shows a slideshow of his photography, and about rules of taking photos (permission, etc.) Rick also introduces different views in photography and types of photos. All took photos with digital cameras, made folders to keep work organized, and took guided photos of a still life. The objects used in the still life photography were chosen by each student. We then viewed the photos taken by the participants in a slideshow and Chris gave a tour of the AGE building.

**Day 2:** We organized a 1950s style photoshoot with an antique car, which a volunteer brought to camp. We dressed up in costumes that Carol had prepared. After the shoot we gathered to discuss what we thought of the shoot, had lunch, and then took some time to unwind by dancing and making art. The class also had a hands-on lesson creating compositions with viewfinders that Carol provided. We each took three different portrait shots of a partner: close up, mid, and wide shot. We also drew portraits with oil pastels and markers, learning the correct proportions of the face to prepare ourselves for the upcoming field trip to The Blanton Museum of Art where they were holding a portrait exhibition. We viewed the photos taken at the car photoshoot in a slideshow, and then discussed the plans to visit the Apple Store the following day.

**Day 3:** We took public transportation to the Apple Store to learn how to make a slideshow with a theme, music and title for the photos we had taken at camp. We learned about using laptops, ipads, and other technology from the employees at the store.

**Day 4:** The class walked to the café nearby camp for individual evaluations. I sat with each student assisting them in filling out their self-evaluation form and then the group took a brief trip to the Access Gallery, and then returned back to camp for lunch and a playacting activity with Carol pretending to be a woman needing assistance using her camera. The students had to step in to show their photography skills to assist Carol's character.

**Day 5:** Students are asked to create signs for part of the UDL instruction reading photo, color, contrast, etc. We circled up to review the happenings of last week, and then learned about editing photos. We had more time to dance after lunch and then continued to learn about editing. We had another preparatory discussion about the field trip to The Blanton while creating some art using empty bottles, magazines, newspapers, and paint.

**Day 6:** The class went to The Blanton to view a show about portraiture. On the way we visited the art store near The University of Texas' campus, took a walk through campus, and explored the museum. We had lunch on campus with same aged peers and then rode a series of busses to return to camp.

**Day 7:** We made cards for Rick to thank him for his help and reviewed the previous day's field trip. We discussed what we liked, what we learned, and remembered specific works of art to critique. The class broke off into pairs to have a short portrait photoshoot, each individual having the opportunity to both take the photo, and model for the shot. We then had a student driven lesson on internet safety and social media.

**Day 8:** The last day of camp was dedicated to evaluations and the showcase of student artwork. The first half of the day we traveled to the café to repeat the self evaluation to see how students have progressed. After evaluations everyone had lunch, and prepared for the showcase where student's friends and family came to camp for some refreshments and to see what the students have been up to during camp. Each student was highlighted in the slideshow that Rick prepared, and their best photography was displayed. The drawings and sculpture were made during camp were also shown at this time.

### ***Camp #2***

**Day 1:** We completed some housekeeping tasks and paperwork before learning the basics of the Flip camera and film. We worked with shoeboxes and small characters to practice using the camera in teams. We also played a short film game where one student would repeat a fun line from a movie, and the rest of us would guess where it came from. We had some physical activity in the form of theatre warm ups and experimenting with puppets. We completed the day with some traditional art making using the portraits that the students made in the previous camp. They altered the photographs to create new and interesting compositions.

**Day 2:** We continued the book making project that students started in the first camp, introducing the project to students who had not been in the first camp. This time we discussed the storyboarding aspect of our book projects. We took a trip to the gallery and café to prep students for the gallery show. We also made some masks preparing for a video shoot, and to exercise student's traditional art making skills.

**Day 3:** The class took a field trip to Arthouse, a gallery in Austin. We had a short lesson on trip planning before walking to the bus stop. We stopped for lunch at a pizzeria before making our way next door to the gallery space. The gallery was showing a film about blindness and we all watched as a group before exploring the rest of the space, and then heading back to camp.

**Day 4:** Teams were established to make the individual videos the students were assigned. While one individual's plot was filmed, the other participants helped with costume design, shooting the film, or assisting the person in charge however they needed.

**Day 5:** I missed camp on this day, but I do know that they prepared for the music video shoot for the following day.

**Day 6:** As a group we filmed a music video with guest musicians. There were some staffing issues, having too many people involved in the filming as well as the planning for what the video would include. The participants helped the band pack up and then continued work on their individual films.

**Day 7:** This day was used for self-evaluations and video editing. We also played an internet safety game about what is safe to post, and when an individual needs special permission to use things like images, music, or art reproductions. After this part of class we worked on some artwork to go into the gallery show.

**Day 8:** We tried to collect quotes from students about their favorite part of camp, and what they learned for VSA Texas. We then held the showcase which was very similar to the first camp, but rather than showing photos, we screened videos.

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